



TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

Texas Tuberculosis Work Plan



Tuberculosis and Hansen's Disease Branch

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I. Introduction

The *Texas Tuberculosis Work Plan* sets forth procedures established by the Texas Department of State Health Services (DSHS) Tuberculosis and Hansen's Disease Branch (TB Branch) and the TB/HIV/STD Epidemiology and Surveillance Branch (Surveillance Branch) to ensure all TB programs receiving state funding or in-kind support from DSHS Health Service Regions (HSRs) achieve TB performance standards.

DSHS Central Office Responsibilities

The TB Branch will:

- Distribute funds to maximize the delivery of authorized services to eligible clients;
- Monitor TB programs' budget expenditures on a quarterly basis (if expenditures are below projected amounts, the jurisdictional budget may be decreased);
- Develop standards to prevent and control TB in Texas;
- Monitor and evaluate TB programs on the performance of program objectives to determine effectiveness and compliance with TB essential components of prevention and control standards;
- Provide technical assistance on any aspect of TB prevention and control;
- Work with DSHS Pharmacy Branch to ensure availability of medications and supplies to treat TB disease and infection;
- Provide Texas-specific TB training directly, or in collaboration with Heartland National TB Center and other partners;
- Oversee molecular epidemiology practices and provide technical assistance to investigate transmission patterns and cluster events;
- Oversee TB prevention and control in high-risk populations, including correctional facilities, community corrections, homeless shelters, and other congregate settings;
- Oversee targeted testing initiatives;
- Develop and revise policies and regulations;
- Serve as a liaison with the Centers for Disease Control and Prevention (CDC) and other federal and state partners;
- Serve as the point of contact for international activities involving TB prevention and control; and

- Conduct quality assurance activities.

The Surveillance Branch will:

- Serve as repository for TB data reported to DSHS;
- Collect and analyze reports from TB programs to satisfy TB grant requirements;
- Serve as the point of contact for inter-jurisdictional transfers;
- Promote security and confidentiality standards for TB data exchanges;
- Prepare and report aggregate data to the CDC;
- Prepare TB epidemiologic reports;
- Provide technical assistance to HSRs and local health departments (LHDs) for accurate submittal of TB data;
- Assist with the development of QA procedures and activities; and
- Promote active surveillance activities among TB programs receiving state funding.

TB programs shall comply with DSHS procedures for surveillance and reporting.

DSHS Central Office branches, HSRs and LHDs must comply with the following regarding TB prevention and control activities:

Texas References

- TX DSHS, *Epi Case Criteria Guide*, 2017;
- TX DSHS, *Standing Delegation Orders and Standing Medical Orders for Tuberculosis Prevention and Control*, <http://www.texastb.org>;
- TX DSHS, *Texas Tuberculosis Work Plan*, <http://www.dshs.texas.gov/IDCU/disease/tb/policies/FY2016/Texas-Tuberculosis-Work-Plan.doc>; and
- TX DSHS, TB Branch standards and policies, <http://www.texastb.org>

Centers for Disease Control and Prevention (CDC), (MMWR), American Thoracic Society (ATS), and Other State and Peer-Reviewed References

- American Thoracic Society (ATS) and Centers for Disease Control and Prevention (CDC), *Treatment of TB, Morbidity and Mortality Weekly*

- Report (MMWR)*, Vol. 52 (RR11), 1-77, 2003, <https://www.cdc.gov/mmwr/PDF/rr/rr5211.pdf>
- *American Journal of Respiratory and Critical Care Medicine*, Diagnostic Standards and Classification of Tuberculosis in Adults and Children, Vol. 161, 1376-1395, 1999, <https://www.cdc.gov/tb/publications/PDF/1376.pdf>
 - CDC, *Aggregate Reports for Tuberculosis Program Evaluation: Training Manual and User Guide*, 2005, https://www.cdc.gov/tb/publications/pdf/arpes_manualsm1.pdf;
 - CDC, Controlling Tuberculosis in the United States, *MMWR*, Vol. 54 (RR12), 1-69, 2005, www.cdc.gov/mmwr/preview/mmwrhtml/rr5412a1.htm;
 - CDC, Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis, *MMWR*, Vol. 54 (RR15), 1-43, 2005, https://www.cdc.gov/mmwr/indrr_2005.html
 - CDC, Guidelines for the Prevention and Treatment of Opportunistic Infections Among HIV-Exposed and HIV-Infected Children, *MMWR*, Vol. 58 (RR11), 1-166, 2009, https://www.cdc.gov/mmwr/indrr_2009.html
 - CDC, IGRA Blood Test Fact Sheet, 2016, <http://www.cdc.gov/tb/publications/factsheets/testing/igra.htm>;
 - CDC, *Mycobacterium tuberculosis*: Report of Verified Case of Tuberculosis (RVCT) Instruction Manual, 2009, <http://www.cdc.gov/tb/programs/rvct/InstructionManual.pdf>;
 - CDC, *Quality Assurance for TB Surveillance Data; A Guide and a Toolkit*, <http://ftp.cdc.gov/pub/Software/TIMS/2009%20RVCT%20Documentation/RVCT%20Training%20Materials/Quality%20Assurance%20Materials/QA%20Manual/3%20-%20Overview%20of%20QA%20Process%20-%20FINAL.pdf>;
 - CDC, Targeted Tuberculin Testing and Treatment of Latent TB Infection (LTBI), *MMWR*, Vol. 49 (RR6), 1-43, 2000, <https://www.cdc.gov/mmwr/PDF/rr/rr4906.pdf>
 - CDC, Tuberculin Skin Testing, (TST) Fact Sheet, 2016, <http://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm>;
 - CDC, *Tuberculosis Surveillance Data Training Report of Verified Case of Tuberculosis (RVCT) Instruction Manual*, 2009, <http://www.cdc.gov/tb/programs/rvct/InstructionManual.pdf>; and
 - CDC, Update: Adverse Event Data and Revised ATS/CDC Recommendations against the Use of Rifampin and Pyrazinamide for Treatment of Latent Tuberculosis Infection – United States, *MMWR*, Vol 52 (RR31), 735-739, 2003, www.cdc.gov/mmwr/PDF/wk/mm5231.pdf;

TB programs must comply with all applicable federal and state regulations and statutes, including but not limited to:

- *Tuberculosis Code*, Texas Statutes, Health and Safety Code, Chapter 13, Subchapter B;
- *Communicable Disease Prevention and Control Act*, Texas Statutes, Health and Safety Code, Chapter 81;
- *Screening and Treatment for Tuberculosis in Jails and Other Correctional Facilities*, Texas Statutes, Health and Safety Code, Chapter 89;
- *Control of Communicable Diseases*, Texas Administrative Code (TAC), Title 25, Part 1, Chapter 97, Subchapter A;
- *Tuberculosis Screening for Jails and Other Correctional Facilities*, Texas Administrative Code (TAC), Title 25, Part 1, Chapter 97, Subchapter H; and
- *Medical Records*, Texas Administrative Code Title 22, Part 9, Chapter 165, §165.1,
[https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=22&pt=9&ch=165&rl=1](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=22&pt=9&ch=165&rl=1).

II. Purpose

The purpose of the *Texas Tuberculosis Work Plan* (Work Plan) is to describe the framework of a regional and local TB program and outline activities to meet DSHS standards.

The Work Plan

- Serves as a prescriptive document to design and maintain a TB program;
- Outlines expectations and responsibilities of all funded programs;
- Assures consistent TB prevention and care practices are applied throughout Texas; and
- Provides a blueprint to assess performance outcomes based on quality indicators.

Funded TB programs must provide services to persons with suspected or confirmed TB disease, contacts to a known source case, and targeted groups without consideration of a client's ability to pay. The above clause includes but is not limited to Class-B immigrants and refugees.

III. Program Stewardship and Accountability

General Requirement

Implement a comprehensive TB program and manage resources in an effective manner that focuses on stewardship and accountability.

LHDs and HSRs will perform the following in accordance with the Work Plan:

- Implement a comprehensive TB prevention and control program;
- Develop and maintain TB policies and procedures;
- Provide services to evaluate, treat, and monitor clients with suspected or confirmed TB disease;
- Initiate contact investigations (CIs);
- Provide services to evaluate, treat, and monitor contacts to suspected or confirmed cases of pulmonary, pleural, or laryngeal TB disease;
- Initiate court-ordered management when needed;
- Provide treatment services for at-risk persons diagnosed with TB infection;
- Develop and maintain TB surveillance mechanisms for early identification and reporting;
- Submit designated reports using established deadlines, schedules, and DSHS-approved mechanisms;
- Perform targeted testing;
- Apply appropriate administrative, environmental, and respiratory controls to prevent exposure to and transmission of TB;
- Provide professional education, training and orientation for new TB program staff and maintain continuing education for current TB program staff;
- Monitor budget expenditures and maintain accurate, and concise records;
- Comply with confidentiality and security standards;
- Monitor surveillance, reporting, and case management activities in correctional facilities;
- Perform self-auditing activities to assess clinical care services and reporting practices; and
- Perform ongoing continuing quality improvement activities to achieve Texas performance measures.

IV. Conduct Overall Planning and Develop Policies

General Requirement

Develop and maintain policies and procedures that align with the Work Plan and TB Branch standards. References, DSHS program policies and procedures are published on the DSHS TB website, <http://www.texastb.org> and are available for guidance. Local and regional policies and procedures must not contradict TB Branch requirements and guidelines. Refer to DSHS TB website for all DSHS program policies, procedures, and standards.

Activities:

A. Develop and implement written policies and procedures covering the following topics:

- Program administration
- Training
- Reporting
- Surveillance
- Infection control
- High-risk population screening and evaluation
- Discharge planning and continuity of care
- Cohort reviews
- Program evaluation
- Laboratory testing for TB
- Case management
- Contact investigations (CI)
- Client confidentiality
- Security
- Outbreak and incident reporting
- Cluster investigations

Ensure that written policies and procedures are easily accessible to all staff responsible for TB prevention and care activities.

B. Review policies and procedures at least once every three years and revise as appropriate to conform to DSHS standards and best practices.

C. Maintain and keep available for staff a list of local community resources



to assist TB clients with food, shelter, social services, and other medical services. Refer patients who do not have a medical home to federally qualified health centers (FQHC); see <https://www.dshs.texas.gov/chpr/fqhcmmain.shtm>.

V. Manage Tuberculosis Cases and Suspects

General Requirement

Provide services to evaluate, treat, and monitor clients with suspected or confirmed TB disease, regardless of ability to pay. Ensure TB clients are appropriately managed, regardless of the jurisdiction in which they are counted. Adhere to procedures outlined in the DSHS Standing Delegation Orders (SDOs) and Standing Medical Orders for Tuberculosis Prevention and Control.

Activities:

- A. Collaborate with health care institutions, hospitals, long-term care facilities and correctional facilities to ensure appropriate management of clients with suspected or confirmed TB disease.
- B. Create a medical record for each person with suspected or confirmed TB disease (See also SDO on TB clinical services).
- C. Implement initial infection control practices. (See Table 5.1 or Section 11 of the Work Plan)
 1. Place surgical mask on clients who arrive for TB services at the TB clinic.
 2. Place client in an airborne infection isolation room (AIIR) if available at each clinic visit until client has met criteria for non-infectiousness as outlined in the DSHS SDOs.
 3. Coordinate discharge planning with in-patient facilities for clients being released to outpatient care. The following discharge planning criteria should be met:
 - a. A specific plan exists for follow-up care;
 - b. Client is started on the standard multi-drug TB treatment regimen and directly observed therapy (DOT) arranged; and
 - c. No infants or children (< 5 years) or immune-compromised persons are present in the household (when possible).

- d. Constraints on traveling while infectious
 - Direct clients to refrain from travel outside of home, except for healthcare-associated visits until client has met criteria for discontinuation of isolation as specified in Table 5.1.
 - Direct clients traveling for any health care-associated visits, to wear a surgical mask for the duration of travel and visit.
- D. Obtain consents and place signed consent forms in client's medical record. If client moves to another jurisdiction, consent forms must be prepared by the receiving jurisdiction and submitted to the client for signature. Signed consent forms must be placed in the client's medical record.
- E. Develop treatment and case management plan
 - 1. Develop an initial treatment and case management plan for each client within one week of diagnosis (i.e. within one week of initiation of therapy for a person suspected to have TB or the identification of a positive culture).
 - 2. Create a written agreement describing the shared roles and responsibilities between a private medical physician providing TB health care services and the TB program regarding the client's treatment care plan. This plan should be presented in writing to the private medical provider and the client to ensure proper treatment, coordination of care and reporting.



Table 5.1. Recommended guidelines for release from hospital isolation of infectious TB clients

TB Client Characteristics at Diagnosis	Current Isolation and Release Criteria	Guidelines for Adults and Children with Adult Type Disease
<ul style="list-style-type: none"> Sputum Acid Fast Bacilli (AFB) smear (+), and/or Nucleic Acid Amplification Test (NAAT) (+) or Client suspected of having active TB 	Hospitalized under inpatient airborne isolation or home isolation and being released to: <ul style="list-style-type: none"> General hospitalization, or Outpatient congregate setting, or Home or setting with high-risk contacts. 	Discharge from airborne isolation client <i>must</i> meet all of the following criteria: <ol style="list-style-type: none"> Received standard multidrug anti-TB therapy for at least two weeks, if original AFB smear (+) OR, if original AFB smear (-), be on therapy for 5-7 days Demonstrated adherence to DOT Demonstrated clinical improvement 3 consecutive AFB (-) smears collected at least 8 hours apart with at least 1 early morning specimen No risk factors for drug resistance
<ul style="list-style-type: none"> Sputum AFB smear (-) & TB is not suspected, NAAT if done (-), and/ or Another diagnosis is likely 	Hospitalized under inpatient airborne isolation and being released to: <ul style="list-style-type: none"> General hospitalization, Return to school, or Return to work, or Allowed to travel on public transportation 	Discharge from airborne isolation client <i>must</i> meet all of the following criteria: <ol style="list-style-type: none"> 3 consecutive AFB (-) smears collected at least 8 hours apart with at least 1 early morning TB is not likely and another diagnosis is identified
<ul style="list-style-type: none"> Sputum AFB smear (-), and TB is suspected or confirmed through NAAT 	Hospitalized under inpatient airborne isolation or home isolation and being released to return to normal activities including: <ul style="list-style-type: none"> General hospitalization, Return to school, or Return to work, or Allowed to travel on public transportation 	Discharge from airborne isolation client <i>must</i> meet all of the following criteria: <ol style="list-style-type: none"> Have received standard multidrug anti-TB therapy for 5-7 days Demonstrated adherence to DOT Demonstrated clinical improvement Have 3 consecutive AFB (-) smears collected at least 8 hours apart with at least 1 early morning specimen Have no risk factors for drug resistance
<ul style="list-style-type: none"> Multidrug-resistant TB (MDR) or Extensively drug-resistant (XDR) confirmed disease* 	Hospitalized under inpatient airborne isolation and being released to: <ul style="list-style-type: none"> Return to school, or Return to work, or Allowed to travel on public transportation 	Discharge from airborne isolation client <i>must</i> meet all of the following criteria: <ol style="list-style-type: none"> Receiving and tolerating appropriate multidrug anti-TB regimen Demonstrated adherence to DOT Demonstrated clinical improvement Have 3 consecutive AFB (-) cultures

Adapted from Heartland National Tuberculosis Center

*If needed, consult with a DSHS-recognized medical consultant

3. Facilitate establishment of a medical home, if client does not have a medical home. Regardless of client's insurance status, identify local community resources which serve indigent clients and the uninsured, and refer as appropriate. If available, provide referrals for clients needing primary or specialty clinical care.

F. Consider TB screening parameters

1. Interferon gamma release assay (IGRAs) can be used in place of (but not in addition to) tuberculin skin tests (TSTs) in situations in which a TST is used as an aid to diagnose TB disease and infection, with preferences and special considerations noted below.
2. This includes contact investigations, testing during pregnancy, and screening of health care workers and others undergoing serial evaluation for TB disease and infection.
<http://www.cdc.gov/tb/publications/factsheets/testing/igra.htm>.
3. Populations in which IGRAs are preferred for testing:
 1. Persons who have received Bacille Calmette-Guérin (BCG) as a vaccine or for cancer therapy;
 2. Persons from groups with historically poor rates of return for TST reading; or
 3. Persons who are three (3) years of age or older; TST is preferred over IGRAs for testing children less than three (3) years of age.
4. Do not use TSTs or IGRAs to test persons with a low risk of developing TB infection or disease.

Note: IGRA tests supported by DSHS funds must not be offered and provided to any organization or establishment without prior documented approval from the TB Branch.

G. Education

1. Provide initial and ongoing education to clients on:
 - Transmission and pathogenesis of TB;

- Means to decrease transmission and the need for infection control;
 - Rationale for DOT;
 - Seriousness and importance of completing treatment;
 - Significance of conducting a complete and thorough CI;
 - Protected health information (PHI);
 - Adverse drug reactions and drug interactions of TB medications;
 - Need for clients to discuss adverse drug reaction symptoms and other treatment concerns with nurse case manager as they occur; and
 - Consequences of non-adherence to treatment.
2. Document initial and ongoing education and counseling in client's medical record progress notes and also on DSHS form TB-203 or equivalent.

H. Conduct screening and evaluation (See DSHS TB SDOs).

1. Perform screening for TB disease and infection.
2. Collect client history and conduct physical exam.
 - Educate clients about collecting specimens. If clients are expected to mail specimens to the DSHS laboratory, provide instructions about collecting, packaging, and mailing a specimen. These instructions should be thoroughly and simply explained both orally and in writing before the client is asked to produce and package an unobserved specimen.
 - Conduct physical exam
 - Determine appropriate TB test needed given client's age, BCG status, and other factors as listed previously. Review existing laboratory results, chest radiograph (CXR), and symptoms. Determine what is missing from the chart.
 - Collect and review:
 - Clinical specimens and client medical history (See Table 5.2 on collection of clinical specimens to diagnose TB);
 - Social history
 - CXR results (See Table 5.3, common terminology on a radiologist's report);
 - AFB smear results (See Table 5.4, smear report significance);

- Baseline test results;
- Existing risk for comorbid conditions (diabetes, HIV (+), HCV (+), HBV (+));
- Drug susceptibility results (See Table 5.5, drug susceptibility patterns).

Extended drug susceptibility testing must be performed on all isolates with resistance to any first line agent, such as isoniazid, rifampin, pyrazinamide and ethambutol.

Ensure that initial isolates are sent to DSHS laboratory in Austin for genotyping regardless of the laboratory that performed AFB smear and culture tests;

- Signs and symptoms (s/s); and
 - TB test results (IGRA or TST).
- Conduct screenings for HIV, hepatitis, and diabetes
 - Determine period of infectiousness (See Table 5.6)
 - Collect sputum specimens, as per SDO on sputum collection

Table 5.2. Types of specimen collected to diagnose TB disease

Suspected Diagnosis	Specimen Needed
Pulmonary or laryngeal TB	<p>Sputum (phlegm from deep in the lungs).</p> <p>If a diagnosis of pulmonary TB cannot be established from routine sputum collection, whether natural or induced, other procedures may be necessary, including, bronchoscopy and gastric aspiration in children.</p>
Extra-pulmonary TB	<p>Anatomical sites include but are not limited to:</p> <ul style="list-style-type: none"> • Urine • Cerebrospinal fluid • Pleural fluid • Pus or other aspirated fluid • Biopsy specimens • Blood (heparinized)

Source: Adapted from MMWR 2005; 54 (No. RR12)

Table 5.3. Terminology on a radiologist's report

CXR Radiology Term associated with Tuberculosis Findings	Meaning
Consolidation	Often referred to as an ill-defined opacity
Cyst/cavity	Focal spaces or "holes" in the lung: both indicate the absence of lung tissue; a cavity being more likely to be TB, and generally indicative of greatest infectiousness
Fibrosis	May or may not be active disease and requires further evaluation
Granuloma	A small, calcified nodule, usually not indicative of active disease
Opacity*	A circumscribed area that appears nearly white (i.e. denser) than its surroundings; may be parenchymal, pleural, within the chest wall, or external to the patient
Lymphadenopathy	Enlarged lymph nodes seen as soft tissue densities: usually more indicative of active disease in a child
Miliary	Many tiny nodules resembling millet seeds scattered throughout
Nodule/mass	Discrete opacity measuring 2 to 30 mm; a nodule greater than 30 mm is considered a mass often indicative of a carcinogenic process
Miliary	Many tiny nodules resembling millet seeds scattered throughout
Nodule	Well defined opacity

Source: Tuberculosis Nursing: A Comprehensive Guide to Patient Care, 2011

*Source: Radiographic Manifestations of Tuberculosis, 2nd Edition, Curry Center, 2011

http://www.currytbcenter.ucsf.edu/sites/default/files/radiographic_complete_2nded.pdf

Table 5.4. Smear report significance*

Quantity Reported[†]	DSHS Laboratory Quantitation	Smear Result	Infectiousness of Client
4+/numerous (>9/field)	>10/field	Strongly positive	Probably very infectious
3+/few-numerous (1-9/field)	1-10/field or >10/field	Strongly positive	Probably very infectious
2+/few (1-9/10 fields)	<1/field or 1-10/field	Moderately positive	Probably infectious
1+/rare (1-9/100 fields)	<1/field	Moderately positive	Probably infectious
Actual number of AFB seen (no plus sign) (1-2/300 fields)	1 or 2 AFB seen on entire smear	Weakly positive [†]	Probably infectious
No acid fast bacilli seen	No AFB seen on direct smear	Negative	Probably not infectious ^β

Definition of abbreviation: AFB = acid fast bacilli.

* Reporting methods may vary by laboratory. Check with your laboratory(s) for specific interpretation.

[†] American Thoracic Society, CDC, Diagnostic standards and classification of TB in adults and children, American Journal of Respiratory Critical Care Medicine. 2000; 161: 1376-1395.

^β The criteria for determining whether a client may be considered noninfectious are discussed in Module 5: "Infectiousness and Infection Control" of the CDC's *Self-Study Modules on Tuberculosis*.

Source: Tuberculosis Nursing: A Comprehensive Guide to Patient Care, 2011

Table 5.5. Drug susceptibility patterns

Category	Sensitivity patterns
Pan-sensitive	Sensitive to streptomycin, isoniazid, rifampin, ethambutol and pyrazinamide
Other drug-resistant	Resistant to any one anti-TB medication except isoniazid or rifampin
Poly-resistant	Resistant to at least two first-line anti-TB medications (but not both isoniazid and rifampin)
Mono-resistant	Resistant to one first-line anti-TB drug only
Multi-drug resistant	Resistant to at least both isoniazid and rifampin
Extensively drug resistant	Resistant to isoniazid and rifampin, plus resistant to any fluoroquinolone and at least one of three injectable second-line drugs (such as amikacin, kanamycin, or capreomycin)

Table 5.6. Estimating beginning of the infectiousness period

Index Patient Characteristics						Recommended Beginning of Likely Period of Infectiousness
TB Symptoms		AFB Bacilli Sputum Smear (+) Results		Cavitary CXR		
Yes	No	Yes	No	Yes	No	
✓			✓		✓	Three months prior to symptom onset or first positive finding consistent with TB disease (whichever is longer)
✓		✓		✓		Three months prior to symptom onset or first positive finding consistent with TB disease (whichever is longer)
	✓		✓		✓	Four weeks before the date of suspected diagnosis.
	✓	✓		✓		Three months prior to first positive finding consistent with TB disease

Adapted:

California Department of Public Health TB Control Branch; California TB Controllers Association, Contact investigation guidelines, 2009; CDC, National TB Controllers Association. Guidelines for the investigation of contacts of persons with infectious TB: recommendations from the National TB Controllers Association and CDC, and guidelines using the QuantiFERON®-TB Gold test for detecting *Mycobacterium tuberculosis* infection, U.S. MMWR, 2005, 54 (No. RR-15):7; and Tuberculosis Nursing: A Comprehensive Guide to Patient Care, 2011

- Prepare a written control order (“Order to implement and carry out measures”) to persons with suspected (Class V) or confirmed TB disease (Class III).
 - Use DSHS form TB-410 or equivalent
 - Place control order in client’s preferred language.
 - Document in medical record, if an interpreter (or guardian) reads the control order to client before the client signs the control order.
3. Monitor monthly adherence to treatment, response to treatment, and medication side effects or adverse reactions. Document in client record.
 4. Conduct monthly follow-up laboratory tests and assessments as per DSHS SDOs and document in the client record the results and interventions as necessary.
- I. Client record-keeping requirements (see DSHS SDOs).
1. Documentation in client’s medical records.
 - Organize client’s medical records according to locally determined chart order with clear section divisions. All forms, reports, progress notes, etc. should be accurate and securely attached in the medical record;
 - Date and sign all entries in progress notes;
 - Document in chronological order, leaving no open spaces in the medical record progress notes. Draw a line through and initial any blank areas;
 - Document assignment of nurse case manager and all other case management team members;
 - Place a copy of any referral including the source and date of the initial report to the TB program;
 - Document all reasons a drug is withheld when initiating medical treatment (physician’s order) or when resuming medications (physician’s order) in progress notes and on appropriate reporting forms;
 - Document clinical tests and other evaluations in medical record, i.e., NAATs, drug susceptibility testing, HIV and hepatitis screening results, CXRs, observations by clinical staff, client education, contact investigations, initial and follow-up interviews, and DOT.

- Document period of infectiousness, including the start of infectious period and date isolation is discontinued. (See Table 5.6 Estimating period of infectiousness).
 - Document reasoning for any adjustment in client's medication regimen;
 - Document expert consultation(s);
 - Document the medical provider's evaluation if a client is not responding clinically or remains culture positive after two (2) months of treatment.
2. Document case management and treatment on DSHS forms TB-201, TB-202, TB-400A, TB-400B, etc., or their equivalent.
- Ensure a copy of DSHS form TB-400A (or equivalent) or RVCT is received by TB case registrars no later than 14 business days after the client reports or is referred to the health department for evaluation and/or treatment. Keep form in client's medical record.
 - Keep copies of DSHS form TB-400A and 400B (or equivalent) in client's medical record.
 - Document start date of an appropriate regimen, including client's weight and drug dosages in the medical record and on appropriately signed DSHS form TB-400B (*which serves as a physician medication order form*).
 - Document updates of nurse case management activities:
 - Medication changes, using DSHS form TB-400B
 - Treatment and bacteriology results, i.e. biopsy results, initial positive AFB smear or *M.tb* culture, first consistently negative AFB smear or *M.tb* culture, sputum culture conversion, susceptibility culture results, regimen starts and restarts, DOT regimen changes , extension of therapy, hospitalization, quarantine, CXR results, clinic return, closure, etc.
 - Document all client services in medical record (DSHS form TB-201 or equivalent); and
 - Complete medical and social history (DSHS form TB-202 or equivalent).
- J. Provide DOT and document using DOT log, DSHS form TB-206

1. Provide DOT to all clients with suspected or confirmed TB disease until client is no longer listed as a suspect and classified as a non-count, or until completion of a recommended course of therapy for persons with TB disease. DOT is the standard of care in Texas.
2. Document reasoning/justification in the clinical record, if DOT is not provided.
3. Complete all appropriate fields on DSHS form TB-206 (DOT log) or equivalent.
4. Indicate clearly on DOT log which medications are provided. Note any medication change on the log and sign appropriately.
5. Pursue appropriate actions when a DOT or clinic appointment is missed, up to and including court-ordered management.

K. Medication

1. Document in the client medical record the signed medical order for treatment for TB by the prescribing clinician. This should include the medications, dosages, and frequency, and route of treatment, using form TB 400A or B or equivalent. There are two treatment phases for clients diagnosed with TB disease (see DSHS SDO on medication). Standard treatment regimens for TB include an:
 - a. Initial treatment phase consisting of isoniazid (INH), rifampin (RIF), ethambutol (EMB), and pyrazinamide (PZA) for the first two months followed by the;
 - b. Continuation treatment phase consisting of INH, RIF for the remaining months.
2. Order TB medications.
 - Order TB medications and reconcile inventory through the DSHS Inventory Tracking Electronic Asset Management System (ITEAMS).
 - Ensure TB medications and supplies purchased with TB Branch funds are only used in a prudent manner and not distributed to entities for which local or regional TB program do not provide treatment oversight.

- Order only enough medication for a one (1) month supply. Typical turnaround time for receipt of medication from the Pharmacy Branch is within 24 hours after ordering. Therefore, a need to order more than one month of medications rarely exists. If assistance is needed, consult with the TB Branch.
- Set maximum stock levels to no higher than a one-month average usage.
- Monitor and manage usage of TB medications and testing supplies furnished by DSHS in accordance with first-expiring-first-out (FEFO) principles of inventory control.
- Order packets for clients new to therapy with individual drugs to avoid waste (e.g. 10 packets of Rifampin, 10 packets of Isoniazid) to maximize usage.

DOT-packaged medications have a much shorter expiration date than their original manufacturer expiration date, typically two-to-six months after packaging. Therefore, if one medication in the packet expires, the entire packet must be disposed. To avoid this waste, consider ordering packets for clients new to therapy with individual drugs (e.g. 10 packets of Rifampin, 10 packets of Isoniazid) to maximize usage. Then client-specific packets of multiple medications may be ordered when convenient.

DOT packets cannot be used for persons receiving video-enabled DOT also known as VDOT. Refer to DSHS the Video-Based Directly Observed Therapy Required and Recommended Activities.

3. Store anti-TB medications safely and securely.

- a. Store all DSHS-purchased medications properly and securely in accordance with the manufacturers' instructions. The following temperature and humidity ranges reflect the most common storage conditions for medications.
 - Freezer: -25° C to -10° C (-13° F to +14° F)
 - Refrigerator: 2° C to 8° C (36° F to 46° F)
 - Controlled Room Temperature: 20° to 25° C (68° to 77° F)
 - Dry: not exceeding 40% relative humidity at controlled room temperature

- b. Keep all medications and medical devices in a secured area not accessible to the public. Keep medications in a locked storage cabinet or drawer in a controlled-access area. Limit personnel access to this area.

4. Order second-line TB medications.

- a. To order second-line TB medications for clients diagnosed with drug-resistant TB, the requesting TB program must notify the TB Branch at Tbepievaluation@dshs.texas.gov and send the following to the TB Branch via PHIN:
 - DSHS ITEAMS order;
 - DSHS forms TB-400A and TB-400B; and
 - TB expert medical consult letter/email recommending second-line medications.
- b. To order second-line TB medications for clients NOT diagnosed with drug-resistant TB, the requesting TB program must notify the TB Branch at Tbepievaluation@dshs.texas.gov and send the following to the TB Branch via PHIN:
 - Physician's note indicating the medical necessity for the second-line medication;
 - DSHS ITEAMS order;
 - DSHS form TB-400B or equivalent; and
 - TB expert medical consult letter/email recommending second-line medications.
- c. Second-line medications include but are not limited to the following groups:

Injectable Agents	capreomycin, amikacin, streptomycin;
Fluoroquinolones	levofloxacin, moxifloxacin;
Bacteriostatic Agents	ethionamide, para-aminosalicylic acid, cycloserine; and
Other Agents:	linezolid, clarithromycin, azithromycin

5. Reconcile medication inventory.

- a. Count DSHS-purchased medications and supplies.
- b. Reconcile bulk inventory according to product and lot numbers listed in ITEAMS no later than the seventh (7) working day of each month. *Bulk medication inventory* refers to bottles of medications, as opposed to packets of medication.
- c. Transfer products that have not been used in six to nine months (or will not be used in six to nine months) to another TB program where demand is greater.
- d. Record the transfer to another TB program facility as a "transfer order" by selecting the reason from the ITEAMS drop down list. For medications that have expired or otherwise cannot be used, each facility should have established procedures in place to destroy or dispose of medication waste responsibly.
- e. Coordinate with ITEAMS inventory staff to ensure TB orders comply with best practices.
- f. Store all DSHS-purchased medications properly and securely in accordance with manufacturer's instructions.

6. Conduct case completion follow-up.

a. Closing Client's Medical Records.

1. Close record, if a client is no longer on treatment, as:

- "Completion of adequate therapy",
- "Non-TB", "deceased,"
- "Moved out of country," or
- Lost to Follow-Up (LTFU).

2. If client was closed as "completion of adequate therapy" this means that treatment was completed within 12 months, unless client:

- Has MDR or XDR TB;
- Isolates show resistance to rifampin;
- Has meningeal disease; or
- Is less than 15 years of age with miliary disease.

3. If client was closed as Lost to Follow-up (LTFU), the following actions must be performed:

- Make at least three (3) documented attempts to contact a TB client before considering a client as LTFU.
- Document attempts in the progress notes of client's medical record.
- The three (3) attempts include:
 - Calling the client,
 - Visiting the client's residence, and
 - Sending a certified-mail notification of the client's need to follow-up with clinic.
 - Placing the certified mail notification receipt in the client's medical chart.

VI. Conduct and Manage a TB Contact Investigation

General Requirement

Conduct a contact investigation (CI) for persons with suspected (Class 5) or confirmed (Class 3) pulmonary, pleural or laryngeal TB disease and evaluate, treat, and monitor their contacts.

The goal of a CI is to find exposed persons who are likely to be infected or progress to TB disease and to prevent further transmission. Proper case management is key (as described in 2005 MMWR, 54 (No.RR-15) and requires prompt evaluation of contacts, initiation of treatment when indicated, and completion of effective therapy.

Activities:

A. Initiate a contact investigation.

1. Begin initial interview within three (3) working days of a client being reported to the TB program with suspected or confirmed TB diagnosis.
2. Visit the primary residence of a client within three (3) working days of report or notification. The investigator should visit the primary location where the client sleeps and visit other relevant sites of potentially significant transmission as appropriate.
3. Interview the client diagnosed with suspected or confirmed disease (or a parent or guardian for younger children or the next of kin for the client diagnosed at death). The interview should take place in the primary language of the client or their representative, using an interpreter if needed. Clients who are sputum smear AFB positive and/or with CXRs revealing cavitation, must have a second interview conducted after seven (7) days from the initial interview.

B. Educate the client: Explain TB transmission patterns, including TB infection and disease. Establish the infectious period (the time period when disease transmission could have occurred). The TB Branch recommends a full evaluation of any suspected or confirmed TB case with

pulmonary, pleural or laryngeal TB disease and contacts of this suspect or confirmed case.

- C. Gather contact information to support prioritization. The likelihood of disease transmission is dependent upon such factors as the index' infectiousness; and duration of contacts' exposure(s) to an infectious index (See Table 6.1 for contact prioritizations as per CDC).
- D. Determine period of infectiousness in order to focus the CI on those contacts most likely to be at risk for infection and to set the time frame for testing contacts (see Table 5.6, in Section 5 of Work Plan).
1. Generally, assign the start of an infectious period as three months prior to TB diagnosis or onset of symptoms. For further details, see Table 5.6. Some circumstances may indicate an earlier start of the infectious period. Contacts who were potentially exposed during the infectious period are eligible for first round testing.
 2. The date in which contact was broken with a potentially infectious person determines the date of break in contact and therefore the timeframe that the contact is eligible for second round testing; this can be done eight-to-ten weeks after break in contact. If a client is identified *after* first round testing was initiated, and they are identified eight-to-ten weeks after their break in contact to the case, then they are still eligible for second round testing, needing just that one test to complete their evaluation.
 - Determine date contact was broken with the index. A break in contact is defined as physical separation from the case or suspect or from when the case or suspect is no longer considered infectious.
 - Assemble information from index's patient interview and medical record, such as when symptoms were noticed, bacteriology results, and the extent of disease, especially whether large lung cavities exist.
 3. Close the infectious period and release from isolation, when the following criteria are met:

If the index case initially had a positive AFB sputum smear result or other respiratory specimen, the index case must:

- Have three (3) consecutive negative AFB sputum smears, collected in 8-to-24-hour intervals; and
- Received effective treatment (as indicated by *M.tb* TB susceptibility results if known) for at least the equivalent two weeks, and
- Demonstrated diminished symptoms, and
- Exhibited bacteriologic response (e.g., decrease in grade of sputum smear positivity detected on sputum smear microscopy), and
- Have been completely adherent to DOT.

An index case also known as the index, is defined as the first person who presents for evaluation as a confirmed or suspected case of tuberculosis.

If an index case never had a positive AFB sputum smear result, the client must:

- Have three consecutive negative AFB sputum smears, collected in 8-to 24-hour intervals; and
- Received effective treatment (as indicated by *M.tb* TB susceptibility results, if known) for at least five days; and
- Demonstrated diminished symptoms and/or radiographic improvement; and
- Have been completely adherent to DOT.

4. Assess exposure hours of contacts in reference to the index' period of infectiousness.

- Identify locational or environmental information about potential contacts (regarding residence, place(s) of employment, social activities, and travel history).
- Identify weekly and cumulative exposure hours during the index' infectious time period.

5. Document interview results in client record.

6. Complete in its entirety, the following forms to document contact investigation activities:

- Contact Investigation Worksheet (DSHS Form TB-EF12-12062)
- TB-340,
- TB-341
- TB-208 or equivalent.

E. Prioritize all contacts into high, medium or low categories before initiating CI based on infectiousness of index and characteristics of high and medium priority contacts (see Table 6.1). A CI must not be initiated without first prioritizing contacts. Implementing screening activities without performing an in-depth review of the contact investigation work sheet and categorizing contacts according to risk, drains local and state resources and yields little to no results in identifying transmission trends.

1. Evaluate high-risk contacts first. Contacts with the greatest likelihood of progressing to active TB disease should be evaluated regardless of their hours of exposure to an infectious TB case. Refer to DSHS SDO on TB clinical services. These contacts include but are not limited to:
 - Children younger than 5 years old;
 - Clients who have HIV infection or at high risk for HIV infection;
 - Clients who have an immunocompromising condition;
 - Clients receiving immunosuppressive therapy;
2. Determine frequency and duration of exposure: For a contact to an infectious TB case or suspect (pulmonary, pleural or laryngeal TB), an evaluation should be initiated, when a significant number of hours of exposure occurs. For example, ≥ 8 hours in a small, poorly ventilated space, ≥ 16 hours in a small, well ventilated space, or ≥ 24 hours in a classroom sized space (hours are cumulative).
3. Environmental factors must also be considered, such as exposures in small rooms, or rooms with no windows, or large cavernous warehouse rooms. Consider the "concentric circle approach" when determining the prioritization of contacts. Household and high-risk contacts represent the core of the assessment process (or the inner core of the concentric circle).

Using this approach, the closest contacts (with the greatest duration and intensity of exposure) are tested first. Testing must only be

- extended to other (medium priority) contacts with less exposure, if significant transmission is observed.
4. Every effort should be made to avoid testing individuals with low risk of infection.
- F. Use a TB Incident Report Form and consult with the TB Branch for mass or concerning investigations via TX PHIN. See Reporting, Chapter X. Part Q. Section 1 for details. IMPORTANT: If ≥ 50 persons are identified for screening in a single location, or ≥ 25 persons in a K-12 school, epidemiologists in the TB Branch must be notified, Tbepievaluation@dshs.texas.gov.
- G. Consider expanding a CI, if the infection rate is high (the TB Branch generally uses $\geq 20\%$; however, the percentage should be modified based on sentinel events) or when TB disease is identified. An investigation should not be expanded without first reviewing results of screening among high priority contacts.
- H. IGRA tests supported by DSHS funds must not be offered and provided to any organization or establishment without prior documented approval from the TB Branch.
- I. Initiate timing of prioritized contacts' screenings.
1. Initiate screening for high priority contacts within seven (7) working days of identification.
 2. Initiate screening for medium priority contacts after the rate of infection among high priority contacts indicate transmission.
 3. Perform TB screenings with DSHS-supplied IGRA as the *preferred* testing choice in Texas. TST may be used, if client is unable to receive an IGRA or refuses phlebotomy.
 4. Testing should be performed in accordance with DSHS-approved age requirements.
 - IGRA is preferred in individuals aged 3 years and older:

- IGRA is also needed among high-risk individuals who previously received a BCG vaccine.
- 5. As needed, request a consult with DSHS TB Branch epidemiologists to discuss whether an expansion of the investigation is warranted below medium-priority contacts by sending an email to Tbepievaluation@dshs.texas.gov. Submit incident report via TX PHIN. Report all contacts evaluated.
- J. Conduct first and second round screenings (See DSHS SDO on TB clinical services).
 - 1. Initiate and complete the first round testing within four (4) weeks of identification. An evaluation consists of the first contact interview to obtain relevant medical history (including specific questions about symptoms of TB disease, previous positive IGRA or TST and/or previous treatment for TB) and may include administration and reading of a TST or IGRA, a CXR, and collection of sputum and/or another specimen for examination.
 - 2. Initiate and complete second round testing at 8-10 weeks for all contacts whose initial IGRA or TST results were *negative* after documented contact break with the index, including contacts started on window prophylaxis.

Contacts continuing to remain negative at second round testing and asymptomatic have received a full evaluation.

Table 6.1. Contact evaluation prioritization

<p>Pulmonary/ laryngeal/ pleural TB</p> <ul style="list-style-type: none"> • Cavitory lesion on CXR; or • AFB sputum smear positive 	<p>High Priority</p> <ul style="list-style-type: none"> • All household contacts; <i>or</i> • Contact in a congregate setting (schools, detention facilities, etc.); <i>and</i> with significant frequency and duration of exposure <p>Any hours of exposure for:</p> <ul style="list-style-type: none"> • Children < 5 years; <i>or</i> • Contact with medical risk factors (e.g., HIV, immune compromising condition); <i>or</i> • Contact exposed during specific medical procedures (bronchoscopy, sputum induction, <i>or</i> autopsy). <p>Medium Priority</p> <ul style="list-style-type: none"> • Anyone 5 – 15 years who does not meet one of the high priority criteria; <i>or</i> • Contacts with significant frequency and duration of exposure. <p>Low Priority</p> <ul style="list-style-type: none"> • Only consider if expansion is warranted.
<p>Suspect or confirmed pulmonary/pleural TB</p> <ul style="list-style-type: none"> • Abnormal CXR consistent with TB disease; and • AFB sputum smear negative; and • Might be NAAT positive and/or AFB culture positive 	<p>High Priority</p> <ul style="list-style-type: none"> • All household contacts; <i>and</i> • Contacts with significant frequency and duration of exposure. <p>Any hours of exposure for:</p> <ul style="list-style-type: none"> • Children < 5 years; <i>or</i> • Contact with medical risk factors (e.g., HIV, immune compromising condition); <i>or</i> • Contact exposed during specific medical procedures (bronchoscopy, sputum induction, <i>or</i> autopsy). <p>Medium Priority</p> <ul style="list-style-type: none"> • Contact in a congregate setting (schools, detention facilities, etc.); <i>and</i> • Contacts with significant frequency and duration of exposure. <p>Low Priority</p> <ul style="list-style-type: none"> • Only consider if expansion is warranted.

Source: Adapted from MMWR 2005; 54 (No. RR-15)

K. Recommendations for contacts to a relapsed case.

If a client who was treated previously for TB disease relapses and active disease is confirmed again, retest those contacts whose prior TST or IGRA results were negative in addition to any new contacts identified since therapy was completed

L. Consider contacts to multi- or extensively-drug resistant TB cases

All contacts to a case of MDR-TB or XDR-TB for which treatment is recommended must receive consultation from a DSHS-recognized

expert TB consultant,
<http://www.dshs.texas.gov/idcu/disease/tb/consultants/>

M. Coordinate contact investigation activities.

1. Continue to identify contacts throughout the client's treatment period. For each newly identified contact, document the date of identification and the date of a break in contact with the index.
2. Re-interview client one to two weeks after initial interview to clarify or obtain missing data. Additional interviews may be required.
3. For example, a client should be re-interviewed when susceptibility results indicate drug resistance or genotyping results indicate the client is part of a cluster.
4. Re-interview the contact and possibly use different interviewers, if drug resistance is strongly suspected or if drug resistance to at least INH and RIF is documented—despite the knowledge that contact investigations are initiated before resistance patterns are known.

N. Coordinate CI activities with the medical staff and administrators in any congregate setting in their service area, including:

1. Collecting names and evaluation results of contacts in congregate facilities;
2. Collecting names and locating information for community contacts;
3. Advising congregate facilities when expansion of CI activities is necessary; and
4. Consulting with DSHS congregate settings coordinator as needed.

O. Consider factors associated with an increased risk for progression to TB and transmission before deciding whether to expand a CI. Household and high-risk contacts represent the core of the assessment process (or the inner core of the concentric circle). In summary:

1. Prioritize contacts.
 2. Consider exposure hours per week and cumulative hours of contact to the index and the infectiousness of the index as core determinants, See Table 6.1.
 3. Consider expanding a CI, if the infection rate is high (the TB Branch generally uses $\geq 20\%$; however, the percentage should be modified based on sentinel events) or TB disease is identified. An investigation should not be expanded without first reviewing results of screening among high priority contacts.
 4. Consider the testing results of the high priority contacts before addressing any additional contacts.
 5. As needed, request a consult with DSHS TB Branch epidemiologists to discuss whether an expansion of the investigation should extend below medium-priority contacts by sending an email to Tbepievaluation@dshs.texas.gov.
- P. Be aware of and act on indicators of recent transmission; this may include re-interviewing the index and expanding the CI.
1. Infection rates of high and medium priority contacts exceed background prevalence of TB infection in the community;
 2. Positive TSTs in contacts less than 5 years of age;
 3. A change in TST or IGRA status from negative to positive among contacts between first and second-round testing; or
 4. Contacts diagnosed with TB disease.
- Q. Use genotyping information in contact and cluster investigations.
1. Use genotyping information from TB GIMS to confirm and assess suspected epidemiological links among TB clients identified through routine contact investigations (see State TB GIMS Program Standard User Guide, <https://sams.cdc.gov>). To obtain this file, a user account for TB GIMS must be active. Consult with TB Branch epidemiologist, if assistance is needed.
 2. Health department TB clinics must note epidemiological links to cases in their records and surveillance database. Records should be updated as new epidemiologic links are identified.
 3. Repeat the IGRA or TST for all contacts with negative results based on each exposure to an infectious case eight-to-ten weeks from the last break in contact.

R. Conduct monthly reviews of genotyping information and examination of concerning local contact investigations and clusters.

1. Ensure that key data such as infectious periods, medical history, treatment completion history, etc., are updated.
2. Consult with TB Branch epidemiologists on complex, sensitive, or extended CIs or in the identification of multi-drug resistant (MDR) or extensively drug resistant (XDR) TB cases that share a genotype.
3. Also consult with TB Branch epidemiologists when a false positive TB culture is suspected.
4. Cluster investigations should always include a review of case records to establish degree of infectiousness.

VII. Manage Contacts to Confirmed or Suspected TB Cases

General Requirement:

Provide services to evaluate, treat, and monitor contacts to suspected or confirmed cases of pulmonary, pleural, or laryngeal TB disease. Adhere to procedures outlined in current DSHS SDOs.

The goal of contact management is to evaluate contacts promptly, initiate treatment when indicated, and ensure completion of effective therapy whether TB infection or disease is identified.

Activities:

- A. Evaluate high priority contacts. Consider the testing results of high priority contacts before addressing any medium or low priority contacts.
 1. Conduct medical evaluations of high-priority and if CI is expanded, medium-priority contacts.
 - Initiate and complete the first round testing within four (4) weeks of identification.
 - Refer for and obtain a CXR, if the initial IGRA or TST result is positive and no history exists of a previously positive TB test within 14 calendar days. TB programs with on-site radiograph equipment should obtain a CXR within ten (10) calendar days. If the CXR is not suggestive of TB disease and the contact is asymptomatic, offer treatment for TB infection unless contraindications to treatment exist.
 - Face-to-face physician medical evaluation at diagnosis is preferable for initiation of treatment or resumption of medications.
 2. Review and assess the completeness of the contact's medical evaluation.
 3. Continue to collect copies of medical evaluation (i.e., lab results, CXR, history and physical, etc.) from treating physician.
 4. Review documentation to ensure it is correct and signed.

- B. Determine TB infection and its treatment (See DSHS SDO on TB clinical services)
1. If CXR is normal, no indication of disease exists, and active TB disease has been ruled out, consider treatment for TB infection.
 2. Considerations should be made as to the type of treatment client is offered based on susceptibilities of the current index case if known. For contacts who took INH in the past and are now exposed as a contact to an INH resistance case, RIF may be needed for the new exposure.
 3. If an infected contact did not previously complete treatment for TB infection, evaluate for TB disease, which includes a symptom review and a chest radiograph. If there is no indication of disease, consider treatment for TB infection
 4. If contact has previously completed treatment for TB infection, further treatment may not be required unless recommended by the treating physician. Considerations should be made as to the type of treatment client completed for TB infection and the known susceptibilities of the current case.
 5. Counsel contact about signs and symptoms of TB disease.
 6. Provide medication as indicated in DSHS SDO on medications.
 7. Perform clinical follow-up after baseline assessment and testing when indicated (See DSHS SDO on medical screenings and managing clients with TB infection)
 8. Conduct at least monthly review of adherence to TB infection treatment.
 9. Conduct monthly review of adverse reactions to TB infection treatment.

10. Provide DOT to clients on intermittent or short course therapy (once weekly) for TB infection, for contacts to MDR or XDR-TB, and for others as indicated in the SDOs.

C. Perform second-round evaluation of contacts.

1. Among contacts with initial negative TB test (IGRA or TST) results, repeat TB screening test 8 to 10 weeks after each contact's last exposure to the index patient during the infectious period, including contacts started on window prophylaxis (see discussion on recommendations for high-risk contacts).
2. Assess for TB disease if a contact tests positive and exhibits symptoms for TB disease and/or has an abnormal CXR. See DSHS SDO on TB clinical services.
3. Contacts continuing to remain negative at second round testing and asymptomatic have received a full evaluation.
4. Clients receiving treatment for TB infection and who report or begin to exhibit symptoms suggestive of TB disease should have their medications on hold, and should receive a follow-up CXR before continuing on treatment for TB infection.

D. Recommendations for high-risk contacts

1. Provide window prophylaxis to eligible clients (see SDOs for criteria), if no contraindications to treatment exist even if they are asymptomatic and have:
 - Initial negative IGRA/TST result, and
 - Normal CXR
2. If the repeat TB screening test remains negative 8-10 weeks after break in contact for children 5 years of age and under, then treatment can be discontinued.

3. If the repeat TB screening test remains negative after 8 weeks or more from break in contact to infectious TB (beyond the window period) for clients with HIV infection, clients receiving immunosuppressive therapy for organ transplantation, or clients taking TNF- α inhibitors, then it is recommended to complete a full course of treatment for TB infection beyond the window period.
 4. The decision to treat, however, is based on a physician's assessment and diagnosis. HIV-infected individuals may need the results of the smears, cultures, or other rapid diagnostic procedures on appropriate specimens to differentiate between TB infection and active TB disease.
- E. Recommendations for managing delays or interruption in treatment for TB infection.
1. Contacts who have not started treatment for TB infection within one month of initial CXR showing no abnormalities suggestive of TB disease AND are at high risk of progression to active TB disease must have a repeat CXR with no abnormalities suggestive of TB disease prior to initiation of therapy.
 2. Contacts who have an interruption in TB infection treatment longer than one month during the first 2 months of treatment AND are at high risk of progression to active TB disease (see list of high-risk contacts) must have a repeat CXR showing no abnormalities suggestive of TB disease prior to re-initiation of therapy. Otherwise, reimaging is not necessary unless the client has symptoms consistent with active TB disease.
 3. All other contacts who are not at high risk of progressing to active TB disease and have not started treatment for TB infection within 3 months of initial CXR with no abnormalities suggestive of TB disease must have a repeat CXR showing no abnormalities suggestive of TB disease prior to therapy initiation.
 4. All other contacts who are not at high risk of progressing to active TB disease and have an interruption in TB infection treatment longer than 3 months must have a repeat CXR showing no abnormalities

suggestive of TB disease, if the prior CXR was performed greater than 6 months ago, prior to resuming treatment.

F. Treatment for TB infection (including clients on window prophylaxis).

1. Follow guidance from DSHS SDO on Medications in “TB clinical services” for recommended treatment drug regimens, and completion of therapy for those contacts with TB infection;
2. Ensure 12 doses with DOT are provided to clients (diagnosed with TB infection) who are placed on a DSHS-approved short course regimen, also referred to as 3HP with INH and RPT, within 16 weeks; and
3. Document when contact has completed treatment or stopped medication on appropriate DSHS reporting form, DSHS form TB-400A or equivalent. Document the reason medication was stopped, if treatment was not completed.

G. Consider contacts to MDR or XDR cases.

1. All contacts to MDR-TB or XDR-TB cases must receive a consultation from DSHS-recognized expert TB consultant, (See DSHS SDO on TB clinical services).
2. Provide treatment to all clients by DOT for contacts to MDR/XDR TB who are diagnosed with TB infection. Consider video DOT for infected contacts to an MDR/XDR case.

H. Provide initial and ongoing education to infected contacts regarding the following topics:

- TB epidemiology, transmission, and pathogenesis;
- Importance of completing treatment;
- Confidentiality of client information;
- Rationale for DOT when necessary or required;
- Common adverse drug reactions and drug interactions of TB medications;
- Responsibility of contact to discuss symptoms of adverse drug reactions with their clinic nurse, physician, or DOT provider; and
- Signs and symptoms associated with progression to TB disease.

- I. Instruct client to contact the TB clinic staff for follow-up evaluation, if symptoms of TB disease occur at any time.

VIII. Conduct Targeted Testing

General Requirement

Identify high-risk groups and congregate settings for which testing for TB infection and disease are justified. The goal for targeted testing is to identify, evaluate, and treat persons who are at high risk for TB infection or at high risk for progressing to TB disease.

Adhere to procedures outlined in the current DSHS SDOs.

Activities:

- A. Develop a targeted testing plan to identify and treat persons or population groups at high risk for developing disease once infected.

Identify the necessary resources for follow-up medical evaluation and treatment before initiating testing activities. Decisions to conduct targeted testing should be based on the ability to provide treatment services.

Conduct TB testing activities *only* among high-risk groups and/or settings. Unfocused population-based testing is not cost-effective and drains limited resources.

A decision to test is a decision to treat. Offer treatment for TB infection to clients, regardless of age, unless medically contraindicated once TB disease has been excluded. Provide clinician's reason in the medical records as to why treatment was not recommended (i.e., alcohol addiction, drug abuse, mental illness, unstable housing, low-income, deportation, etc.).

- B. Document targeted testing activities in the TB Branch Annual Progress Report and track those persons who start treatment for either TB infection or disease and complete treatment.
- C. Submit Congregate Settings Targeted Testing Monthly Report (DSHS form EF12-14427) to TB Branch no later than the second Friday of the month for testing from previous month.

D. Assess local epidemiologic data to assess the need for targeted testing, particularly congregate settings.

1. Targeted testing initiatives are recommended in settings where TB prevalence is high or the consequences of an undiagnosed case are severe.
 - a. Examples include: homeless shelters, nursing homes, dialysis centers, residential facilities, social service programs for persons with HIV, drug and alcohol rehabilitation centers and methadone centers, correctional facilities, clinics evaluating and managing transplant clients and migrant farm worker camps.
 - b. Complete DSHS form TB-207 for these activities.
 - c. Genotype cluster(s) in one of these settings indicates a high-risk setting or population.
 - d. Provide guidance to medium and high-risk facilities (e.g., health care and correctional facilities) operating or starting a TB screening program.

E. Identify persons at risk for developing TB disease or considered to be a high-risk contact.

1. Evaluate at-risk population candidates for TB infection such as contacts, refugees, Class-B immigrants, discharged inmates, or other clients with medical risk and/or high-risk TB populations to prevent infected persons from developing TB disease and stop further spread of TB. (See DSHS SDO on TB clinical services and TB screening flow chart)
 - a. Perform TB screenings (IGRA or TST).
 - b. Use TST, if client is unable to receive an IGRA or refuses phlebotomy.
 - c. Testing should be done for the following populations in accordance with DSHS-approved age requirements:
 - Clients with signs and symptoms or clients being evaluated for active TB disease;
 - Clients with confirmed TB disease;

- Close contacts to a case of suspected or confirmed TB disease (consultation with the TB Branch is required for contact investigations in which 50 or more persons are targeted for screening). Provide information that determines contacts as high and medium risk having significant exposure;
- Employees providing TB services;
- Employees, residents, and volunteers of high-risk congregate settings (e.g., correctional facilities, nursing homes, homeless shelters, hospitals, and other health care facilities);
- Foreign-born persons who have immigrated within the last five (5) years from countries with a high incidence of TB disease;
- Persons with a history of travel to areas with a high incidence of TB disease;
- Some medically underserved, low income populations defined locally as having an increased prevalence of TB disease;
- Persons who inject illicit drugs or other groups of high-risk substance users (e.g., injection drug users, heroin, etc.)
- Class-B immigrants; and
- Refugees.

F. Assess effectiveness of targeted testing.

1. Determine effectiveness based on:

- The TB infection yield;
- The likelihood of identifying infected individuals that will progress from TB infection to disease (risk classification), and
- TB treatment completion rates.

2. Submit Congregate Settings Targeted Testing Monthly Report (DSHS form EF12-14427) to TB Branch no later than the second Friday of the month for testing from previous month.

G. Evaluate Class-B immigrants (See DSHS SDO on TB clinical services <https://www.dshs.texas.gov/idcu/disease/tb/policies/>)

1. Use the Electronic Disease Notification System (EDN, see edn@cdc.gov) to facilitate evaluation of Class-B immigrants.
 - a. Initiate direct access to the EDN System

- b. Contact the congregate settings team in the TB Branch, if assistance is needed
 - c. Receive notifications of alien arrivals from EDN and retrieve EDN documents containing medical and contact information.
2. Evaluate all Class-B immigrants within one work week of an event or notification of classification (e.g., note date the screening test was given, date the CXR given, etc.).
3. Review all pre-departure medical records closely.
4. Obtain a thorough medical history which includes a listing of current signs or symptoms of disease (e.g., weight loss, night sweats, fever, cough), specific information identifying a person at higher risk of TB disease or infection, as well as the following:
 - Previous history of TB;
 - Illness suggestive of TB such as cough > 3 weeks, dyspnea, weight loss, fever, night sweats or hemoptysis;
 - Prior treatment suggestive of TB treatment;
 - Prior diagnostic evaluation suggestive of TB; or
 - Family or household contact with a person who currently has or has had TB disease, treatment, or diagnostic evaluation suggestive of TB;
5. Consider the following:
 - Physical examination should include height, weight, temperature, respiratory rate, blood pressure, thorough pulmonary examination, and inspection and palpation of all major palpable lymph node beds.
 - In addition, a careful skin examination is important, as it may reveal cutaneous disease, scars from scrofula or Bacille Calmette-Guérin (BCG) vaccination, or hints of prior chest surgery that may alert the clinician.
6. Considerations for children in this population:
 - A history of recurrent pneumonia, failure to thrive, or recurrent or persistent fevers should increase the provider's index of suspicion.

- Providers should keep in mind that children experience higher rates of extrapulmonary TB disease, including meningitis and disease of the middle ear and mastoid, lymph nodes, bones, joints, and skin.
7. Initiate an appropriate medical evaluation within 30 days of arrival in Texas, and complete the evaluation within 90 days of arrival in Texas.
8. Perform alien follow-up.

- a. Contact the refugee or immigrant within 3 working days of receiving EDN documents, and
- b. Schedule an appointment for evaluation.
- c. Make a telephone call within 24 hours of receipt of documents.

Step 1:

- If no phone number available, send a letter to the home address listed in the EDN documents.
- If no response to phone call within 7 working days, send a letter to the home address listed in the EDN documents.
- If the only address listed is for a sponsor agency, contact the sponsor agency to verify the client's address.

Step 2:

- If no response to letter within 10 working days, make a home visit.

Step 3:

- If all attempts to locate refugee or immigrant have failed, close record and enter, "lost to follow-up" on the TB Worksheet.
- d. Assess the client as described in Tables 8.1 through 8.4 TB Follow-up Worksheet for recommendations for arrivals with a TB class condition and as per DSHS SDOs.
- Assess for signs and symptoms of TB, and
 - Perform TB screening test (IGRA or TST).

Table 8.1. Completing EDN TB Follow-Up Worksheet, Sections A-C

Instructions for Completing EDN TB Follow-Up Worksheet, Sections A-C	
The TB Follow-Up Worksheet is used to document the initial evaluation of an arrival with a TB class condition. A complete evaluation requires a diagnosis, and when indicated a treatment start date.	
Sections A & B: demographic & jurisdictional information	<ul style="list-style-type: none"> Pre-populated
Section C: Date of initial U.S. Medical Evaluation	<ul style="list-style-type: none"> Record date of initial evaluation
<ul style="list-style-type: none"> IGRA or TST 	<ul style="list-style-type: none"> Administer TB screening test (IGRA or TST) Record: date, brand and results of IGRA or TST used, and interpretation. <p>For persons with TB Class-B conditions or TB-related abnormalities on CXR, a TST of ≥ 5 mm is considered positive.</p> <ul style="list-style-type: none"> Record if a history of previous positive IGRA or TST.
<ul style="list-style-type: none"> U.S. Review of Pre-Immigration CXR 	<ul style="list-style-type: none"> Arrivals should bring their pre-immigration CXR film(s) or disk with them to exam. If the pre-immigration CXR is not available, mark "No." If the pre-immigration CXR did not have the client's name and date of birth, mark "Not Verifiable." Record physician's interpretation of pre-immigration CXR. Do not copy overseas panel physician's interpretation of pre-immigration CXR into EDN follow-up worksheet (FUW).
<ul style="list-style-type: none"> U.S. Domestic CXR 	<ul style="list-style-type: none"> Record interpretation of CXR ordered by the medical director or consulting physician. Do not copy overseas panel physician's interpretation of pre-immigration CXR into EDN FUW. If your medical director or consulting physician does not perform a CXR, mark "No."
<ul style="list-style-type: none"> Comparison 	<ul style="list-style-type: none"> Compare pre-immigration CXR to U.S. CXR and chose the one option that best represents your clinician's impression of the comparison. If the pre-immigration CXR is not available, mark "Unknown."

Table 8.2. Completing EDN TB Follow-Up Worksheet, Sections C and D

EDN TB Follow-Up Worksheet, Sections C and D	
The TB Follow-Up Worksheet is used to document the initial evaluation of an arrival with a TB class condition.	
<ul style="list-style-type: none"> • U.S. Review of Pre-Immigration Treatment 	<ul style="list-style-type: none"> ▪ Record interpretation of pre-immigration TB treatment based on review of client-provided pre-immigration documents and information.
<ul style="list-style-type: none"> • U. S. Microscopy/ Bacteriology 	<ul style="list-style-type: none"> ▪ Collect specimen(s) for AFB smear and culture. Document specimen type, collection date and results. ▪ Report suspected pulmonary or extrapulmonary TB disease to TB Branch within one (1) working day. Do not wait for culture confirmation.
Section D: <ul style="list-style-type: none"> • Evaluation Disposition Date 	<ul style="list-style-type: none"> ▪ Record date when medical director or consulting physician has completed the evaluation, if determined that the evaluation cannot be completed for one of reasons listed.
<ul style="list-style-type: none"> • Evaluation Disposition 	<ul style="list-style-type: none"> ▪ If the evaluation was completed, check the box "Completed evaluation". Indicate whether treatment was recommended. If so, indicate whether for TB disease or TB infection. ▪ If the evaluation was initiated but not completed, check box "Initiated Evaluation/Not Completed." Select reason(s) why evaluation was not completed from list below. Check all that apply and write or enter other reasons beside "Other, specify." ▪ If the evaluation was never initiated, check the box "Did not initiate evaluation." Choose the reason(s) why the evaluation was never initiated from the list provided. Check all that apply and write/enter other reasons beside "Other, specify."
<ul style="list-style-type: none"> • Diagnostic 	<ul style="list-style-type: none"> ▪ Mark the box corresponding to the CDC diagnostic classification as listed. ▪ Treatment is inappropriate for diagnoses of Class 1 or 0. The EDN system will create an error message, if treatment is recommended for either of these diagnoses. ▪ If diagnosis is Class 3, mark the site(s) of disease and contact Surveillance Branch to report. Contact TB Branch epidemiologist if assistance is needed completing section D4.

Table 8.3. Completing EDN TB Follow-Up Worksheet, Section E

EDN TB Follow-Up Worksheet, Section E	
The TB Follow-Up Worksheet is used to document the initial evaluation of an arrival with a TB class condition.	
Section E: • U.S. Treatment Initiated	<ul style="list-style-type: none"> Only complete this section, if treatment was recommended in question D2. If treatment was initiated, mark "Yes," and for "If Yes," specify for TB disease or TB infection. Treatment must comply with CDC recommendations. Clients diagnosed at Class 2 or Class 4 should receive treatment unless contraindicated. Consult the DSHS SDOs or TB Branch, if uncertain which regimen to prescribe. Treatment for Class 3 should rely on DOT and be provided through the client's local or regional health department. If treatment was not initiated, mark "No," and for "If No, specify the reason," mark the appropriate boxes. Check all that apply and enter other reasons next to "Other (specify)."
• Treatment Start Date	<ul style="list-style-type: none"> Only complete this section, if treatment was initiated. Specify date treatment was started (mm/dd/yyyy).
• U.S. Treatment Completed	<ul style="list-style-type: none"> Leave this section blank until treatment has stopped. Save the worksheet in EDN, but do not "submit" until treatment has completed or ended. Mark the appropriate box to indicate whether treatment was completed or if it is unknown whether treatment was completed. If treatment was not completed, mark "No," and for "If No, specify the reason," mark the appropriate boxes. Check all that apply and enter other reasons next to "Other (specify)." If treatment was completed, specify the date next to "Treatment Completion Date" (mm/dd/yyyy). If treatment was initiated but not completed, specify the date treatment ended (date client stopped taking treatment) next to "Treatment End Date" (mm/dd/yyyy).

IX. Conduct Surveillance to Identify Unreported Individuals with Suspected or Confirmed TB

General Requirement

Develop and maintain TB surveillance mechanisms for early identification and reporting.

Activities:

A. TB Programs must be able to:

1. Designate at least one person with the ability to work on surveillance and case registry activities at least 85% of the time.
2. Provide hardware and software necessary to conduct case registry activities (e.g., THISIS, access to web based training and tools; PHIN access; access to WinZip or similar encryption software, etc.).
3. Maintain data security and confidentiality standards (see section XIV. Confidentiality and Security Standards).
4. Complete prerequisite trainings (see section XII. Maintain a Competent Workforce).
5. Process and manage data for cases, suspects, contacts, others with TB infection and referrals (interjurisdictional transfers, or IJNs).
6. Verify address and ensure client address location is a valid residential address.
7. Verify case criteria for the following: lab confirmed, clinical, clinical by provider diagnosis.
8. Ensure suspect record criteria is met.
9. Collect data, and follow-up as needed to complete the RVCT.

10. Investigate unreported lab confirmed cases.
 11. Ensure a report of contacts is submitted for every infectious or potentially infectious case; a minimum of three contacts should be reported and fully evaluated for sputum AFB smear positive cases.
 12. Improve case detection by active surveillance, and reporting.
 13. Follow reporting and surveillance procedures found in the following documents:
 - Procedures for surveillance and reporting
 - Texas DSHS Epi Case Criteria Guide, 2017
 - CDC, Mycobacterium Tuberculosis: Report of Verified Case of Tuberculosis (RVCT) Instruction Manual 2009
 - CDC Quality Assurance for TB Surveillance Data; A Guide and a Toolkit
 - CDC, Aggregate Reports for Tuberculosis Program Evaluation: Training Manual and User Guide 2005
 - THISIS Core Manual
 - THISIS TB Surveillance Manual
- B. At least quarterly, contact providers who deliver TB services to at-risk populations to increase case reporting.
- C. Educate and train providers and other key facilities on reporting.
1. Provide education and training about TB reporting and surveillance to at least four of the following annually:
 - Hospitals;
 - HIV clinics;
 - Homeless shelters;
 - Drug rehabilitation facilities;
 - Indigent care facilities; and
 - Kidney dialysis facilities.
 2. Training must include but is not limited to the following elements: TB case definition, when to report, how to report, and Texas legal

reporting requirements (see <http://www.dshs.state.tx.us/idcu/investigation/conditions/>).

3. Report these activities in the Annual Progress Report to the TB Branch.

D. At least quarterly, communicate with the HIV/STD or general surveillance program staff in the local and regional health departments to identify unreported HIV/TB co-infections.

1. Maintain documentation of these activities, then complete and submit the Surveillance Quality Assurance Template (SQA Template) via the PHIN to the Surveillance Branch within ten (10) days after the end of each quarter.
2. Obtain SQA Template from the designated case registry consultant.
3. Report educational activities on the TB Branch Annual Progress Report.

E. Reporting of Cases and Suspects

1. Report a case of TB within 45 days of when the following occurs:

a. Laboratory confirmed (one of the following):

- i. Isolation of *Mycobacterium tuberculosis* complex from a clinical specimen. (Rapid identification techniques for *Mycobacterium tuberculosis* [e.g., DNA probes and mycolic acids high-pressure liquid chromatography performed on a culture from a clinical specimen] are acceptable under this criterion.)
- ii. Detection of *Mycobacterium tuberculosis* from a clinical specimen by NAAT, Nucleic acid amplification test must be accompanied by AFB culture for mycobacteria species. However, for surveillance purposes, CDC will accept results obtained from NAA tests approved by the Food and Drug Administration [FDA] and used according to the approved product labeling on the package insert. Current FDA approved NAA tests are only approved for smear-positive respiratory specimens.

- iii. Identification of positive AFB smears, biopsy results indicating granulomas or other findings indicative of TB in a clinical specimen when a culture has not been or cannot be obtained.
- b. Clinical diagnosis includes all of the following:
 - i. A positive IGRA or tuberculin skin test;
 - ii. Other signs and symptoms compatible with tuberculosis (e.g., and abnormal, unstable [i.e., worsening or improving] chest radiographs, or clinical evidence of current disease);
 - iii. Treatment with two or more anti-tuberculosis medications; and,
 - iv. Completed diagnostic evaluation.
- c. Clinical diagnosis based on provider decision requires documentation that includes the provider's rationale or findings on which the diagnosis was based. The following examples may be used as a rationale or finding for TB diagnosis:
 - i. Significant improvement on abnormal chest radiograph;
 - ii. Significant improvement based on symptoms from onset;
 - iii. Child who is a recent contact to an active case;
 - iv. Autopsy report; or
 - v. Consultation by DSHS recommended TB Expert physician
- 2. Report within 45 days, a suspected TB case (ATS classification 5) to the Surveillance Branch when any one of the following is identified:
 - a. Criteria for reporting a TB suspect includes any one of the following:
 - i. AFB positive smear from any anatomic site;

- ii. A result from a rapid laboratory analysis method, such as NAAT or high performance liquid chromatography, that is positive for *Mycobacterium tuberculosis*;
- iii. Biopsy, pathology, or autopsy findings suspicious for active TB disease;
- iv. Contacts (to a TB suspect) that were identified and evaluated but a probable record was not reported; or
- v. Death certificate lists TB as an immediate or underlying cause of death but was not reported.

b. Or, at least two of the following:

- i. Positive TST or IGRA;
- ii. Radiographic findings consistent with active TB disease;
- iii. Productive cough > 3 weeks;
- iv. Other signs or symptoms of TB disease;
- v. Initiation of treatment for TB disease; and/or
- vi. Clinical suspicion of pulmonary or extrapulmonary TB disease such that the physician or other health care provider has initiated or intends to initiate isolation or treatment for TB disease.

F. Probable Case Investigation

1. Investigate daily all open probable records received from the Surveillance Branch within 24 hours of notification. The Surveillance Branch creates a probable case investigation based on a report of a Suspect TB Case that meets the surveillance case definition when the Report of Verified Counted Cases of TB (RVCT) has not been submitted from regional or local TB Programs.
2. Other sources for creation of a probable record are:

- Culture confirmation for *M.tb* or *M.bovis* and all other species contained in *M.tb* complex from ELRs;
- Culture confirmation for *M.tb* or *M.bovis* from genotyping, drug resistance program, HIV/STD program, or EDN;
- Vital statistics (death certificate) or a medical examiner's report;
- Hospital admission or discharge summary;
- Pharmacy records of dispensing of TB drugs;
- Infectious Disease Control Unit report of communicable disease;
- Receipt of an out of state referral (IJN); and
- Initiation of a contact investigation.

The Surveillance Branch then notifies case registrars of the probable reportable case. Investigations must be done in priority order as outlined below:

- Jurisdictional assignment;
 - Culture confirmation for *M.tb.* complex, *M.tb*, or *M.bovis*;
 - Missing required data elements to assign a state case number;
 - Missing HIV status (in case this was missing from report);
 - Identification by vital statistics or medical examiner's report;
 - Initiation of a contact investigation, but no submittal of the RVCT;
 - Receipt of an out-of-state referral; and
 - Transfer of a suspected case(s) to another state or out of U.S.
2. Investigate all laboratory reports of AFB smear and culture results received locally within seven (7) working days.
 3. Resolve 100% of all probable records within 45 days of the Surveillance Branch notification. Open cases pending verification that are not received by the Surveillance Branch after 45 business days of TB programs receiving laboratory-confirmed culture or NAAT results, are delinquent.

X. Reporting

General Requirement

TB programs must submit designated reports by established deadlines and schedules using DSHS-approved mechanisms. Managers must consolidate, verify and sign off on all case counts for the current calendar reporting year.

Activities:

- A. Report all TB cases (ATS Classification 3) using the current DSHS and CDC-approved form (RVCT) and the CDC TB-published case criteria within 45 working days of identification of confirmed TB case to the Surveillance Branch via PHIN.

See <http://www.dshs.state.tx.us/idcu/investigation/conditions/> for TX DSHS Infectious Disease Control Reporting webpage.

- B. Include the following minimum required data elements on the RVCT at time of initial report (See Table 10.1):

- Date reported
- Complete first, middle and last name
- Date of birth
- Race and ethnicity
- Country of origin, if not U.S.
- Date of entry into U.S.
- Laboratory data necessary to meet case definition as applicable
- Count status and date counted
- Verification of Texas residency: physical address, city, county, ZIP code with 4-digit code (and if in or outside city limits)
- If diagnosed while in a facility or shelter, provide facility or shelter name
- Initial drug susceptibility results, as applicable

Table 10.1. Data elements as represented on the RVCT.

Patient's Name 	
(Last) (First) (M.I.)	
Street Address 	

4. Reporting Address for Case Counting City Within City Limits (select one) <input type="checkbox"/> Yes <input type="checkbox"/> No County ZIP CODE — 	8. Date of Birth <div style="display: flex; justify-content: space-around;"> Month Day Year </div>
5. Count Status (select one) Countable TB Case <input type="checkbox"/> Count as a TB case in your jurisdiction Noncountable TB Case <input type="checkbox"/> Verified Case: Counted by another U.S. area (state) <input type="checkbox"/> Verified Case: TB treatment initiated in another country Specify <input type="checkbox"/> Verified Case: Recurrent TB within 12 months after completion of therapy	9. Sex at Birth (select one) <input type="checkbox"/> Male <input type="checkbox"/> Female 10. Ethnicity (select one) <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Not Hispanic or Latino 11. Race (select one or more) <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian: Specify <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander: Specify <input type="checkbox"/> White
6. Date Counted <div style="display: flex; justify-content: space-around;"> Month Day Year </div>	12. Country of Birth "U.S.-born" (or born abroad to a parent who was a U.S. citizen) (select one) <input type="checkbox"/> Yes <input type="checkbox"/> No Country of birth: Specify
7. Previous Diagnosis of TB Disease (select one) <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter year of previous TB disease diagnosis: 	13. Month-Year Arrived in U.S. <div style="display: flex; justify-content: space-around;"> Month Year </div>

C. Report remaining RVCT data elements as required for NTIP Reporting.

See Report of Verified Case of Tuberculosis, CDC Tuberculosis Surveillance Data Training. US Dept. of Health and Human Services, CDC, National Center for HIV/AIDS, Viral Hepatitis, STD, and Tuberculosis, p 203, CDC, 2009.

D. Each registry must maintain a digital or electronic log of all cases in their jurisdiction, by county and year counted with the following:

- Name;

- Date of birth;
 - Complete address;
 - Contact information; and
 - RVCT (also referred to as the state case number).
- E. Submit reports of contacts via PHIN on DSHS forms TB-340 and TB-341, or Mass Contact Spreadsheet within 90 days of initial case report to the Surveillance Branch.
- F. The initial contacts' report requires the following:
1. Part A. Case/Suspect Information
 2. Part B. Interview and Exposure Site Information
 3. Part C. Contact information including:
 - Exposure length and setting
 - HIV test results
 - Priority status
 - TST/IGRA test results
 - CXR date and interpretation
 - Verification that a complete evaluation was performed. A complete evaluation for the purposes of the Contact Aggregate Report consists of a TST or IGRA result. If positive, a CXR date and a diagnosis with an ATS classification are required.
 - A symptom screen must be complete for an evaluation to be complete.
 - If evaluation was not performed, provide a reason.
 4. Identify and evaluate at least three (3) contacts of sputum smear positive cases. All missing data must be submitted via PHIN to the Surveillance Branch.
 5. Submit a follow-up report for contacts not placed on treatment for TB infection using DSHS form TB-341 via the PHIN. Include all updated contact information and submit to the Surveillance Branch within 90 days of initial case report.

6. Submit a follow-up report for contacts placed on treatment via PHIN. A report of contacts should be submitted no later than one year from the date contact started on treatment and must include treatment outcome.
7. Report contacts that develop active TB disease before submitting the subsequent contacts of those cases. Be sure to provide linking RVCT numbers.
8. Contact investigation that yields >49 contacts will be reported on the DSHS TB Mas Contact Spreadsheet. This spreadsheet should be requested from DSHS Surveillance consultants before use to ensure the most recent version is available.

The table below (Table 10.2) allows regional and local TB programs to assess their performance based on 2020 National TB Program objectives and performance targets.

Table 10.2. National TB Indicators Project (NTIP) objectives and targets

DSHS TB-340 and TB-341 Reporting Information	NTIP Objectives	US Targets
Contact Elicitation	For TB clients with positive AFB sputum-smear results, increase the proportion who have contacts elicited.	100%
Examination/Evaluation	For contacts to sputum AFB smear-positive TB cases, increase the proportion who are examined for infection and disease	93%
Treatment Initiation	For contacts to sputum AFB smear-positive TB cases diagnosed with latent TB infection, increase the proportion who start treatment.	91%
Treatment Completion	For contacts to sputum AFB smear-positive TB cases who have started treatment for TB infection, increase the proportion who complete treatment.	81%

G. Submit CDC Follow-Up I and II Reports

1. Submit a completed Initial Susceptibility Report (Follow-up I) on all culture-confirmed cases to Surveillance Branch within 45 days after laboratory notification.
2. Submit a completed Case Completion Report (Follow-up II) on all culture-confirmed cases to Surveillance Branch within 90 days of treatment stop date.
3. Provide a justification for any Follow-Up II reports submitted more than 90 days after medication stop date.
4. Provide the last date medication was given when treatment of the client stopped due to completion of adequate therapy, death, failure to locate, and/or 90 days passage since last medication dose.
5. For a case to be "recurrent", the last known drug stop and new regimen start dates must be less than 365 days apart. A "new investigation" means the last known drug stop and new regimen start dates are greater than 365 days apart. Both instances require a new contact investigation.
6. Submit Case Completion Report (Follow-up II) via PHIN to Surveillance Branch.

H. Reporting false positive cases.

1. The Surveillance and TB Branches will assist TB programs' investigation of false positives either due to laboratory contamination or other misdiagnosis.
2. Any cases closed as false positive due to laboratory contamination or other reason must be reported to the Surveillance Branch with documentation to justify change in case status (e.g., amended lab report, doctor's note, consult, etc.) within 45 days of closure.

3. Review all other specimens associated with a false positive case to ensure they are culture negative and the positivity rate remains below the community level.
4. Review any new TST conversions identified during CI process.
5. This information must be reported to the PHIN genotyping folder to facilitate investigation.

I. Inter-jurisdictional notifications (IJN).

1. Any case, suspect, contact, or person with TB infection moving to other jurisdictions, either in or out of state, will be transferred using the National TB Controllers Association (NTCA) IJN referral forms to ensure continuity-of-care.
2. The transferring jurisdiction must:
 - Prepare appropriate referral Inter-Jurisdictional Notification (IJN) forms and send to the receiving jurisdiction when a suspect, case, contact or persons with latent TB infection moves to another jurisdiction, whether in-state, out-of-state, or out of the US, to ensure follow-up and continuity of care. For forms, see http://www.tbcontrollers.org/docs/resources/IJN_Form_May2015.pdf
 - Send all applicable medical information, medical records, and chart information to the receiving jurisdiction;
 - Call to confirm receipt of the medical documentation at the receiving health department;
 - Communicate directly with the staff of the receiving jurisdiction to ensure that the IJN and all other necessary client medical information is received;
 - Follow up on the case periodically to ensure completion of treatment. It is the responsibility of the transferring jurisdiction to report when treatment is complete. This is reflected in the jurisdiction's performance measures as per the CDC.

J. Submitting documents for dispositioned TB suspects.

1. Submit all closed TB suspects and their contact investigation documentation to the Surveillance Branch using current DSHS-approved forms via the PHIN within 90 days of initial report.
2. Documentation must include:
 - The RVCT
 - DSHS forms TB-340 and TB-341
 - DSHS form TB-400B

K. Quality assurance and surveillance reports.

1. Update all surveillance missing data reports via PHIN within 30 days of receiving the report.
2. Submit monthly correctional TB screening reports within 15 working days of the following month to the TB Branch.
3. Collect Monthly Correctional TB Report (DSHS form EF12-11462) and Positive Reactor Suspect/Case Report (DSHS form EF12-11461) from those jails and community corrections that meet Texas Health and Safety Code Chapter 89 requirements within five (5) working days of following month.

Review reports for accuracy and completion. Provide guidance to jails and community corrections to complete the Monthly Correctional TB Report.

Requirements for Quality Assurance (QA) for TB Surveillance data are listed in Table 10.3.

L. Drug-resistant cases.

1. Complete and submit DSHS form TB-400 on all newly diagnosed drug resistant cases within five (5) days of notification to the TB Branch via PHIN.
2. Complete and submit an updated DSHS form TB-400B every 90 days

for all drug-resistant cases until treatment completion to the TB Branch.

3. Submit any changes in case management, drug resistance patterns, or residence in any drug-resistant TB case to the TB Branch within 72 hours of notification.

M. Annual Progress Report

1. Submit Annual Progress Report using the TB Branch template to TBContractReporting@dshs.state.tx.us by stipulated contract date.
2. HSRs must submit their Annual Progress Report to TBContractReporting@dshs.state.tx.us by date provided by TB Branch.

N. Cohort Review Reports

1. Submit the completed cohort reviews quarterly via PHIN to the TB Branch in accordance with listed cohort period and submission schedule (See Table 10.4):
 - Completed Cohort Review Summary Report
 - List of all counted cases for each quarter using Attachment 1
 - Completed presentation form for each case presented at each quarterly cohort review.
 - Submit completed cohort review forms in accordance to the Cohort Review Submission Schedule (see Table 10.4).

Table 10.3. Summary of CoAg requirements for TB surveillance data

Summary of CoAg Requirements for Quality Assurance for TB Surveillance Data
<p>TB programs will incorporate quality assurance policies and procedures into surveillance activities to ensure</p> <ul style="list-style-type: none"> • Case detection (finding, counting, and reporting all TB cases); • Data accuracy (accuracy of data abstracted from original client records, of registry data, and of data entered onto the RVCT form and transmitted to CDC); • Data completeness; • Timeliness; and • Data security and confidentiality.
<p>Develop a written protocol for QA for TB surveillance data</p> <ul style="list-style-type: none"> • Describe how each of the QA components (case detection, data accuracy, data completeness, data timeliness, and data security and confidentiality) is being conducted. <p>Qualified Participants</p> <ul style="list-style-type: none"> • Central Office Reporting and Surveillance • State-designated case registries • State-contracted counties
Develop and implement plans for improvement

Source: Quality Assurance for Tuberculosis Surveillance Data: A guide and Tool Kit, 2013

Table 10.4. Cohort review period and submission schedule

Cohort Review Period & Submission Schedule	
Cohort Period Cases Counted In:	Are reviewed and reported by:
1st quarter (Jan 1 to Mar 31) current year	March 31 of following year
2nd quarter (Apr 1 to June 30) current year	June 30 of following year
3rd quarter (July 1 to Sep 30) current year	September 30 of following year
4th quarter (Oct 1 to Dec 31) current year	December 31 of following year

O. Notify the TB Branch of concerning or mass screening CIs within 48 hours:

1. Concerning CIs involve:

- Any pediatric TB case;
- Any MDR/XDR TB case;
- Situations in which media attention is likely;
- Any single location where ≥ 50 contacts are identified;
- Any K-12 school setting involving an exposure of ≥ 25 students and/or teachers;
- Any location of interest (as listed below); or
- Any concerning situation regarding an investigation, not listed above, that the TB Program believes DSHS should be aware.

2. Locations of interest include but are not limited to: academic institutions, day care centers, nursing homes, hospitals, correctional facilities (including community corrections), homeless shelters, airline exposures, other work settings, etc.

3. Send a completed TB Incident Form (DSHS form EF12-12104) within 48 hours of the event through the PHIN to the TB Branch.

4. The Incident Report Form can be found at <http://www.texasTB.org>.

5. Contact a TB Branch nurse consultant or epidemiologist to discuss the following:

- Clinical presentation of the client;
- Medical and social history of the client;
- Screening method and results including test dates (initial round of testing);
- Second round testing dates (planned);
- Radiologic and bacteriologic status including NAAT results;
- Infectious period;
- Contact investigation forms;
- Description of environmental assessment or planned environmental assessment;
- Incident command response plan;
- Results of epidemiologic assessment and next steps; and

- Any other relevant details.
6. Submit timely written updates to the TB Branch as updates are available (or as requested) that may include the following:
- NAAT results;
 - Environmental assessment to determine specific areas in which exposure; occurred and the exposure period;
 - Stratification of contacts by risk;
 - Scheduled and actual dates of screening;
 - Screening methods (i.e. IGRA/TST);
 - Evaluation results based on risk stratification (all high risk contacts should be tested first to determine the need for expansion); and
 - Any other relevant details.

Submit a final epidemiologic update to the TB Branch regarding concerning investigations (as discussed above).

- P. Report mass screenings (contact investigations \geq 50 contacts) when using DSHS-TB Branch purchased supplies. Mass screening should not be performed without prior TB Branch approval.

Every effort must be made to educate and inform the “worried well” regarding the TB screening process which would adhere to TB epidemiologic principles.

Use sound epidemiologic principles in contact investigations to ensure appropriate persons are identified for screening and to determine specific environments in which transmission may have occurred.

Mass screenings that are not epidemiologically guided drain limited resources and yield minimal results.

- Q. Conduct airline exposure screening based on notifications received from the TB Branch through the CDC Division of Global Migration and Quarantine (DGMQ).

1. TB Branch epidemiologists will contact TB programs to provide the name and phone number of the individual(s) exposed during the flight per the CDC DGMQ staff.
2. TB programs must notify airline contacts and instruct them to report to their health department for TB screening;
3. Screen contacts; and
4. Complete the DGMQ TB Contact Investigation Form and submit via PHIN to the TB Branch's TBEpiEvaluation team within ten (10) business days of notification.

R. Submit a report of adverse drug reaction to DSHS Pharmacy Branch

Fill out form EF12-12274 "Report of Serious Adverse Drug Reaction Resulting in Therapeutic Changes, Hospitalization, or Death" and send to the DSHS Pharmacy Branch within two (2) working days of notification of adverse event.

1. Once a DSHS pharmacist receives the report, they will review the information, contact the sender, if needed, and make the determination if a report to the Food and Drug Administration (FDA) should occur.
2. The DSHS Pharmacist will contact the sender for any further documentation needed, such as the TB 400A or TB 400B.
3. Once a determination by the treating prescriber is made for disposition (changes in regimen, resuming or discontinuing medication, for example), the DSHS pharmacist will update the "Pharmacy Only" section of the report and send the form back to the submitter to file in the patient chart.
4. While the Adverse Drug Reaction Form is intended to inform the DSHS Pharmacy Branch of the event, it is the responsibility of the treating prescriber to intervene as necessary and make any changes to regimen when indicated.

5. The DSHS Pharmacy Branch will keep a record of all events reported to the Branch for documentation purposes and to report to the FDA when indicated.

XI. Implement Infection Control Procedures

General Requirement

Apply appropriate administrative, environmental, and respiratory controls to prevent exposure to and transmission of *Mycobacterium tuberculosis*.

Activities:

- A. Develop a written infection control plan, which includes sections on administrative measures, environmental controls, and personal respiratory protection to reduce the risk of exposure, ensure prompt detection of TB disease; airborne precautions; and treatment of people who have suspected or confirmed TB disease.

See "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005,"

www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm.

B. Administrative Measures

1. Develop administrative controls to reduce the risk or exposure to persons with infectious TB.
2. These control measures consist of the following activities:
 - Assign to a staff person the responsibility for TB infection control;
 - Conduct a TB risk assessment;
 - Develop and implement a written TB infection control plan;
 - Ensure the availability of recommended laboratory processing, testing, and reporting of results;
 - Implement effective work practices for managing clients with TB disease and infection;
 - Ensure proper cleaning, sterilization, or disinfection of equipment and surfaces to prevent contamination;
 - Educate, train, and counsel health care workers, clients, and visitors about TB infection and disease;
 - Test and evaluate clinic workers who are at higher risk for becoming infected with TB due to exposure to TB disease;

- Apply epidemiology-based prevention principles, including the use of setting-related TB infection-control data;
- Use posters and signs to remind clients and staff of proper cough etiquette (covering mouth when coughing) and respiratory hygiene; and
- Coordinate efforts with high-risk health-care or congregate settings to reduce and prevent exposure to TB.

C. Environmental controls

1. Consider installing any of the following systems to remove or inactivate *Mycobacterium tuberculosis*: local exhaust ventilation, general ventilation, high-efficiency particulate air (HEPA) filtration, and/or ultraviolet germicidal irradiation (UVGI).
2. Ensure all environmental control equipment are properly installed, operated and maintained.
 - Use local exhaust ventilation (e.g., hoods, tents, or booths); and dilute and remove contaminated air by using general ventilation.
 - Control airflow to prevent contamination of air in areas adjacent to the source airborne infection isolation (AII) rooms; and
 - Clean the air by using high efficiency particulate air (HEPA) filtration or ultraviolet germicidal irradiation.
3. Outline the responsibility and procedures for performing and documenting maintenance of all environmental control equipment in a written TB infectious control plan.
4. Maintain a log of all environmental control equipment maintenance.
5. Document any training required for the proper operation of environmental control equipment.

D. Respiratory controls.

1. Implement a respiratory protection program.

- a. Develop and implement a respiratory protection program (using at least N-95 respirators) for all employees who share the same air space with clients suspected or diagnosed with infectious TB disease.
- b. Use personal protective equipment in situations that pose a high risk of exposure to TB disease;
- c. Develop and maintain policies and procedures on respiratory protection. Include written procedures to select a range of sizes and types of respirators that will fit employees.
- d. Implement fit-testing for all employees that will wear respirators; inspect and maintain respirators;
- e. Train health care workers on respiratory protection
- f. Designate a person to be responsible for the fit-testing program
- g. Fit-test employees at hire and periodically as needed, for all employees who must wear respirators to perform their job functions
- h. Educate clients on respiratory hygiene and the importance of cough etiquette procedures
- i. Evaluate the effectiveness of the respiratory protection procedures through monitoring employees for conversion of TST or IGRA results

2. Maintain and assess screening results.

- a. Maintain employee fit-testing documentation according to local record retention procedures or for at least three years, whichever is longer.
- b. Review results of TB screening for employees at least annually.

3. Environmental infection control.

For clients with suspected or confirmed infectious TB, ensure separation from other clients in the clinic (separate areas or appointment times).

In areas without separate TB clinic facilities, schedule potentially infectious TB clients when other clients are not present. Provide surgical masks and facial tissues as needed.

Procedures that generate large amounts of droplet nuclei (bronchoscopy, sputum collection/induction) should be conducted in AII rooms or booths, if available. For clinics without these capabilities, sputum specimens must be collected outside in a location that protects client confidentiality.

E. Determine infectiousness of TB clients.

1. The infectiousness of a TB client is directly related to the number of droplet nuclei carrying *M. tb* (tubercle bacilli) that are expelled into the air.
2. The number of tubercle bacilli expelled by a TB client depends on the following factors:
 - Presence of a cough;
 - Cavity in the lung;
 - Acid-fast bacilli on sputum smear;
 - TB disease of the lungs, airway, or larynx;
 - Client not covering mouth and nose when coughing;
 - Not receiving adequate treatment or having prolonged illness;
 - Undergoing cough-inducing procedures; or
 - Positive sputum cultures.
3. Clients can be considered noninfectious when they meet all of the criteria as outlined in Chapter 5 of this Work Plan:

F. Assess risk.

1. For LHDs or HSRs that provide TB services to three or more TB clients should follow, at a minimum, TB screening recommendations for medium-risk settings.

See "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005."

2. LHDs with fewer than three clients with TB disease in the last year should follow, at a minimum, TB screening recommendations for low-risk settings and may choose to follow the recommendations for medium-risk settings.

See "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005."

G. Maintain records.

- Maintain records of employee TB screening results according to local record retention procedures or at least 3 years after employment is terminated, whichever is longer.

XII. Maintain a Competent Workforce

General Requirements

Provide professional education, training and orientation for new TB program staff and continuing education for current TB program staff.

Activities:

- A. Demonstrate that all persons providing services under the TB standing delegation orders or equivalent policies and procedures have the requisite experience and/or training to deliver appropriate services.
- B. Provide orientation and training to all employees involved in TB activities, including physicians, nurses, contact investigators, outreach workers, case registry staff, receptionists, and other support staff.
- C. Initial training and continuing education requirements.
 1. Within 90 days of employment, all new TB employees must receive 40 hours of TB training specific to their duties and responsibilities.
 - Use the CDC's "Self-Study Modules on Tuberculosis" for the initial training. See <http://www.cdc.gov/tb/education/ssmodules/default.htm>.
 - For case registry and surveillance staff, initial training will include RVCT, state and national reporting requirements. See <https://www.cdc.gov/tb/programs/rvct/default.htm>
 2. Each year following, employees must receive 16 hours of continuing education relevant to their position.
 3. Case registry staff must attend the annual medical records conferences and workshops to obtain current records management procedures.
 4. At least one case registry staff must participate in the monthly Surveillance Branch conference calls.

5. Newly hired TB program managers, nurses, contact investigators and case registry staff must participate in the TB Branch New Employee Orientation *after* three months of hire.

D. Document TB staff training.

1. Document all professional training (including the hours, topics, and dates) for each employee who delivers TB services.
2. Retain the documentation below and have available upon request.
 - A digital log and scanned certificates (or paper-based certificates that are available for scanning) for review, audit, or to allow each Medical Director and/or Health Authority to verify that those operating under their medical license have the requisite experience and training to deliver services.
 - The above requirement also applies to contracted service providers when limited or no documented information of contractor's requisite experience and/or training exists.

3. Demonstration of this requirement includes:

Track trainings through an onsite digital log (spreadsheet) with the following:

- date training occurred;
- name of person receiving training;
- job title;
- name of the training or course; and
- number of hours received for successful completion of each course.

E. Topics for personnel providing TB services include:

1. Core topics

- Transmission and Pathogenesis of Tuberculosis;
- Epidemiology of Tuberculosis;
- Diagnosis of Tuberculosis Infection and Disease;
- Treatment of Tuberculosis Infection and Disease;

- TB Reporting/TB Notifiable Conditions;
- Cultural Awareness; and
- Interpreter Utilization.

2. Specialized training topics based on duties and responsibilities include:

- Drug Interactions and Toxicity;
- Contact Investigation for Tuberculosis;
- Tuberculosis Surveillance and Case Management in Hospitals and Institutions;
- Infectiousness and Infection Control;
- Client Adherence to Tuberculosis Control;
- Interviewing, Investigating and Influencing Techniques;
- Directly Observed Therapy;
- TB Nurse Case Management Training;
- TB Program Management; and/or
- CDC Tuberculosis Surveillance Data Training (RVCT).

3. Attend Heartland National TB Center trainings including webinars provided by all Regional Training Medical and Consultation Centers, as needed.

4. Participate in DSHS TB and Surveillance Branch trainings.

F. Notifications.

1. Notify the TB Branch of newly hired TB program managers, nurses, contact investigators and case registry staff within 30 days of hire.
2. Submit "Notice of Change in TB Personnel" form no later than the 5th day of each month. Form available at: www.texastb.org.

G. Educate external stakeholders.

1. Provide TB education and training, as resources allow, to schools, correctional facilities, community health care, homeless shelters, and social service providers who may serve populations at high risk for TB or where the consequences of a TB cluster could be severe.

2. Document all community provider TB trainings (including the hours, topics, dates and numbers of participants) and make available upon request to the TB Branch.
3. Community trainings and education are to be reported annually on the Annual Progress Report.

XIII. Monitor Budget Expenditures

General Requirement

Monitor budget expenditures. Maintain accurate and concise records.

Activities:

- A. TB programs may shift funds between direct cost categories by 25% (except equipment).
 - LHDs must notify the DSHS Contract Management Unit (CMU) of any requests in excess of 25%, including any equipment requests.
 - DSHS HSRs must notify the TB Branch of any requests in excess of 25%, including any equipment requests.
- B. Submittal of invoices: Contractor's shall submit requests for reimbursement or payment monthly by the last business day of the month following the month in which expenses were incurred or services provided
- C. The equipment threshold is currently \$5,000. Equipment requests require TB Branch approval.
- D. Notify TB Branch of any changes in personnel, including new hires, vacancies, and changes in salary, job titles or job descriptions by monthly submittal of the "Notice of Change in TB Personnel" form via PHIN (see TexasTB.org).

If a personnel change requires a contract amendment, contractors must notify both the CMU and the TB Branch.
- E. Encumbrances and budget actions should be conducted on a timely basis as directed by the General Provisions, DSHS policy.
- F. LHDs should adhere to all General Provisions and HSRs to all DSHS policies. See <http://online.dshs.state.tx.us/>.

XIV. Confidentiality and Security Standards

General Requirements

All TB programs must perform activities outlined in this plan in accordance with applicable state and federal security and confidentiality standards, policies and guidelines, including but not limited to:

- DSHS Program Policy "Release of TB/HIV/AIDS and STD Data," www.dshs.state.tx.us/hivstd/policy/security.shtm;
- Federal HIV/AIDS Security and Confidentiality guidelines, <https://www.cdc.gov/nchhstp/programintegration/docs/PCSIDataSecurityGuidelines.pdf>;
- DSHS Program Policy No. 2011.01 "TB/HIV/STD Unit," www.dshs.state.tx.us/hivstd/policy/security.shtm; and
- DSHS Program TB/HIV/STD Unit Breach of Confidentiality Response Policy, www.dshs.state.tx.us/hivstd/policy/security.shtm

Activities:

A. Submit documentation to the TB/HIV/STD (THS) Unit Security Officer that all staff and subcontractors working on activities outlined in this work plan have received annual training on 1) Employee standards of conduct; and 2) DSHS security and confidentiality training course.

1. Contact THS Unit Security Officer at Stanley.see@dshs.state.tx.us for information on security training offered at: <https://tx.train.org>.

Note: All newly hired staff must successfully complete confidentiality and security training provided by DSHS within thirty (30) days of being hired.

2. Complete an annual refresher training course on confidentiality requirements/confidential information security (i.e., within one year of having taken the previous confidentiality and security course).
3. Submit all appropriate documentation to DSHS within ten (10) days of completing each course.

- B. Designate and identify a HIPAA Privacy Officer who is authorized to act on behalf of the TB program and is responsible for the development and implementation of privacy and security requirements of federal and state privacy laws.
- C. Designate a TB program staff (i.e. manager) to serve as the Local Responsible Party (LRP) having the responsibility to ensure the security of TB/HIV/STD confidential information maintained by the program.

The LRP must:

- Ensure appropriate policies/procedures are in place for handling confidential information, releasing confidential TB/HIV/STD data, and for the rapid response to suspected breaches of protocol and/or confidentiality. These policies and procedures must comply with DSHS policies and procedures (LHDs may choose to adopt these DSHS policies and procedures as their own).
- Approve any program staff requiring access to TB/HIV/STD confidential information. The LRP will grant authorization to program staff who have a work-related need (i.e., work under this Program Attachment) to view TB/HIV/STD confidential information.
- Maintain a current list of authorized staff persons who have been granted permission to view and work with TB/HIV/STD confidential information.
- Monthly review authorized user list throughout the fiscal year beginning ten (10) days from September 1 of each year.
- Ensure that all program staff with access to confidential information have a signed copy of a confidentiality agreement on file and it is updated annually.
- Train all program staff with access to confidential information on TB/HIV/STD security policies and procedures, including federal and state privacy laws and policies, before access to confidential information is granted.

- Consult with THS Unit Security Officer regarding all suspected breaches of confidentiality in compliance with the DSHS Program Policy "TB/HIV/STD Breach of Confidentiality Response Policy," www.dshs.state.tx.us/hivstd/policy/security.shtm.
- Submit all required quarterly reports on time.

D. Incorporate following security procedures:

- Ensure computers and networks meet DSHS security standards.
- Maintain and provide a current list to DSHS of all personnel with access to secured areas and of all identified personnel who have received security training.
- Maintain and provide a current list to DSHS of personnel with access to all network drives where confidential information is stored and all identified personnel who have received security training.
- Submit requests for TB/HIV/STD systems user account terminations to DSHS within one (1) business day of identifying the need for account termination.

State who should be notified to disable/delete the access to secure data, as well as the secure networks and the areas in which they reside, and confirmation of account termination should be provided to the submitter when the action is completed.

- Transfer secure data electronically via PHIN.
- Maintain a visitor's log for individuals entering secured areas and LRP conducts quarterly reviews of this log.
- Verify user password changes occur at least every 90 days.
- Ensure that portable devices used to store confidential data are approved by the LRP and encrypted.

E. Ensure confidential data are:

1. Maintained in a secured area; and
2. Locked when not in use; and
3. Not left in plain sight; and
4. Shredded before disposal.

XV. Monitor Surveillance, Reporting and Case Management Activities in Correctional and Detention Facilities

General Requirement

Monitor and participate in TB prevention and care activities in correctional and detention activities, except Texas Department of Criminal Justice (TDCJ). The goals of correctional TB activities are early detection (case-finding), containment, treatment and prevention in correctional and detention facilities.

The TDCJ Health Services Division oversees medical services provided by contractors in state prisons and has the statutory authority and responsibility to ensure access to care, monitor the quality of care, investigate medical grievances, and conduct operational review audits of health care services.

Activities:

A. Technical assistance and compliance with state laws.

1. Provide technical assistance on TB prevention and care for all correctional and detention facilities and monitor compliance with state laws.

Regardless of size and ownership, all correctional and detention facilities in Texas, including federal, state prisons, local jails and community correction facilities are subject to the provisions of the Communicable Disease Prevention and Control Act (Texas Health and Safety Code, Chapter 81, Rule § 81.065, 2016) and other applicable federal and state laws.

B. TB screening and treatment.

1. Offer guidance to promote correct and timely screening practices (e.g., symptom screening, testing with TST or IGRA).
2. Provide medical oversight for TB cases, suspects and contacts.

3. Provide consultation for TB infection treatment for high-risk groups.

Initiation of treatment for TB infection should include consideration and planning for likelihood of client continuing and completing treatment under supervision, if released from facility before completion of treatment regimen.

C. Conduct discharge planning and continuity-of-care.

1. Facilitate discharge planning for inmates with confirmed or suspected TB who are scheduled to be released or transferred to other correctional facilities or jurisdictions.
2. Follow-up to ensure that TB cases and suspects continue TB treatment at the TB clinic nearest their residence or at a receiving correctional facility.
3. Provide continuity-of-care for employees and any inmates released to the community who are undergoing treatment for TB disease or infection.
4. Provide technical consultation to ensure adequate precautions are taken while transporting clients between correctional facilities or detention centers.
5. Refer foreign nationals to CURE-TB or TBNet for continuity-of-care coordination outside of U.S.
6. Conduct at least an initial effort to contact all referred, discharged inmates on treatment for TB infection to encourage them to complete therapy.

Repeated efforts to follow non-compliant, HIV-negative, released inmates are not cost-effective.

D. Contact investigation.

1. Coordinate, plan, and actively participate in TB CIs.

- Conduct an interview to identify contacts and determine an inmate's infectious period;
- Assess TB transmission risk based on the TB client's infectiousness, length of exposure to index, environmental factors and contact characteristics (such as HIV positive); and
- Evaluate identified contacts based on CDC priority classification.

2. Provide TB education and counseling to clients

See CDC, *MMWR*, Vol. 54 (RR15); 1-37, 2005

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5415a1.htm>, (see also Section 6 of *TB Work Plan*).

3. Ensure all contacts are thoroughly evaluated.
4. Ensure that infected contacts start and complete treatment for TB infection or TB disease, as indicated.

TB testing may be conducted by the health department or the jail medical staff under the strict guidance by the health department.

E. Additional Requirements for Texas Health and Safety Code Chapter 89 facilities

1. Program activities outlined below are required only for jails and community corrections that meet Texas Health and Safety Code, Chapter 89 criteria, see <http://www.statutes.legis.state.tx.us/Docs/HS/htm/HS.89.htm>.
- To the extent funds are available, distribute Purified Protein Derivative (PPD) and syringes for TB skin testing to jails and community corrections facilities that meet Texas Health and Safety Code, Chapter 89 criteria upon their request (except private jails).
 - Monitor the *Monthly Correctional TB Report* (DSHS form EF 12-11462) to ensure the number of TB tests reported justifies the amount of PPD and syringes provided.
 - Address suspected misuse of state funded supplies immediately with the correctional facility and report to the TB Branch.

F. Correctional TB reporting requirements.

1. Review Monthly Correctional TB Reports for accuracy and completion.
2. Submit the following reports via PHIN to DSHS Congregate Settings Program:
 - Chapter 89 facilities must submit the Monthly Correctional TB Report (DSHS form TB EF-12-11462) and the Positive Reactors/Suspects/ Cases Report (DSHS form TB EF-12-11461) to the HSR or LHD by the fifth (5) working day of the following month.
 - HSRs or LHDs must submit the reviewed Monthly Correctional TB Report (DSHS form TB EF-12-11462) and the Positive Reactors/Suspects/ Cases Report (DSHS form TB EF-12-11461) to the DSHS Congregate Settings Program no later than 15th day of each month.

G. Screening plans.

1. Review Correctional Tuberculosis Screening Plan for accuracy and completion.
2. Submit screening plans to the DSHS Congregate Settings Program at CongregateSettings@dshs.state.tx.us.
 - Chapter 89 facilities must submit the *Correctional Tuberculosis Screening Plan* (form EF 12-11463) to the DSHS Congregate Settings Program for review and approval 90 days prior to the current Screening Plan expiration date or plan anniversary date.
 - Prior to final approval, the TB Branch will forward the Screening Plan to the HSR or LHD for review. The reviewed Plan with the health department comments must be returned to the TB Branch within 10 days of receipt.

H. Training and education.

1. Provide training and education to jail staff, as resources allow.
2. Report this training on the Annual Progress Report.

XVI. Initiate and Maintain Self-Auditing Practices

General Requirement

TB programs must ensure that appropriate clinical and reporting standards are adequately maintained

The goals of auditing are to ensure that TB programs maintain quality standards and to assure the appropriate use of state and federal funds. TB programs must designate staff to review program practices to ensure services are delivered in accordance with DSHS program standards as outlined in the Work Plan.

Activities:

A. The following practices need to be reviewed. Further, requirements are listed in LHD contracts and the audit tool.

1. Medical documentation

- At a minimum, ensure medical record documentation include and follow current Texas Administrative Code requirements, Title 22, Part 9, Chapter 165, Rule §165.1.
[https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=22&pt=9&ch=165&rl=1](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=22&pt=9&ch=165&rl=1)
- Develop a checklist to identify missing information in the medical record.

2. Standing delegation orders (SDOs)

- Ensure the most current SDOs are reviewed and signed annually by authorizing physician and signed or acknowledged in writing by all regional staff serving under those orders, as required by clinical practice.
Note: Authorizing physicians must be able to verify that those operating under their medical license meet the requisite experience and training to provide TB services.

- Retain a signed acknowledgement form for each employee that performs clinical duties that affirms their understanding of the SDOs and the policies and procedures under which SDO activities are performed.
 - DSHS TB Policy 5003 and 22 TAC §193.2 requires the “physician responsible for TB services” to review and sign SDOs at least annually.
 - TB Policy 5003 also assigns TB managers the responsibility to ensure that the SDOs and procedures are reviewed and signed at least annually by employees delivering TB Services.
 - The relationship between the TB program and a private provider should be clear and documented should any complications arise with a client receiving treatment.
 - Policies and procedures are subject to DSHS audits.
3. By October 14th of each year, compile appropriate attestations or signature pages to document acknowledgment of jurisdictional TB policies and procedures at the local level or the DSHS SDOs at the Health Service Regions (HSRs). Orders and procedures are to be reviewed and signed at least annually by all employees delivering TB clinical (registered nurses, licensed vocational nurses, and non-licensed staff) or data services (epidemiologists, case registrars, etc.).
- a. All HSRs must submit the “Attestation of Authorized Licensed Nurses” (Attachment 1) from the TB Standing Delegation Orders (current year) to the TB Branch via the PHIN to the NurseAdmin folder.
 - b. Each local health department (LHD) must send the following documents to the TB Branch via the PHIN to the NurseAdmin folder:
 - Copy of fully signed TB Policies and Procedures signature page, and
 - Copy of table of contents listing all enacted TB policies and procedures.
- B. Regions must provide technical TB support and guidance, as needed, to LHDs that provide TB services.

XVII. Conduct Continuing Quality Improvement Activities to Maintain a Robust TB Infrastructure

General Requirement

Assess program performance by determining rates of completion of therapy, contact identification, and initiation of and completion of treatment for TB infection.

Activities:

A. Quarterly cohort reviews

1. Conduct quarterly cohort reviews in accordance with DSHS TB Branch policy and procedures.
 - Compare treatment completion and contact evaluation rates by cohort periods and years to assess program progress.
 - Identify trends that support or hinder effective TB prevention and control activities.
 - Prepare, complete and submit the Cohort Review Summary and each individual Presentation Form to the DSHS TB Branch in accordance with DSHS submission schedule documented in Cohort Review Policy.

B. Review CDC's National Tuberculosis Indicators Project (NTIP)

1. Review CDC's National Tuberculosis Indicators Project (NTIP) to assess your TB program's progress in achieving performance outcomes.
2. Contact the TB Branch if assistance is needed to help setting up an account.

C. Conduct self-auditing

1. Perform routine case management reviews and document findings. Conduct follow-up reviews to ensure recommendations are addressed.
2. Review NTIP for jurisdictional assessment on performance measures.

3. See also TB Branch's Audit Tool on <http://www.texastb.org>.

D. Update policies and procedures to support continuing quality improvement (CQI) efforts.

E. Meet Texas Performance Measures - FY18

1. Newly reported TB cases must have an HIV test performed (unless they are known HIV-positive, or the client refuses) and must have positive or negative HIV test results reported to DSHS according to the surveillance reporting schedule.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 85.3% is required.

If fewer than 85.3% of newly reported TB cases have an HIV test result reported, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

2. Cases and suspected cases of TB under treatment must be placed on timely and appropriate Directly Observed Therapy (DOT). For comparison, the CDC recommends treatment initiation for TB clients with positive AFB sputum-smear results within 7 days of specimen collection.

For FY18 reporting, data will cover all cases from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 93.4% is required.

If data indicates a compliance percentage for this Performance Measure of less than 93.4%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

3. Newly reported suspected cases of TB must be started in timely manner on the recommended initial 4-drug regimen.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 - 12/31/2017). A compliance percentage of not less than 93.5% is required.

If fewer than 93.5% of newly reported TB cases are started on an initial 4-drug regimen in accordance with this requirement, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

4. Newly reported TB clients ages 12 and older who have a pleural or respiratory site of disease must have sputum AFB-culture results reported to DSHS according to applicable timelines for initial reporting and updated results given.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 93.5% is required.

If data indicates a compliance percentage for this Performance Measure of less than 93.5%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

5. Newly reported cases of TB with Acid-Fast Bacilli (AFB) positive sputum culture results will have documented conversion to sputum culture-negative within 60 days of initiation of treatment.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016-12/31/2016). A compliance percentage of not less than 54% is required.

If data indicates a compliance percentage for this Performance Measure of less than 54%, DSHS may (at its sole discretion) require additional measures to improve the percentage on a timeline set by DSHS.

6. Newly diagnosed TB cases that are eligible* to complete treatment within 12 months must complete therapy within 365 days or less.

*Exclude TB cases 1) diagnosed at death, 2) who die during therapy, 3) who are resistant to Rifampin, 4) who have meningeal disease, and/or 5) who are younger than 15 years with either milia disease or a positive blood culture for TB.

For FY18 reporting, data will cover all cases from calendar year 2016 (1/1/2016 -12/31/2016). A compliance percentage of not less than 89.4% is required.

If data indicates a compliance percentage for this Performance Measure of less than 89.4%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

7. Increase the proportion of culture-confirmed TB cases with a genotyping result reported.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 94.3% is required.

If data indicates a compliance percentage for this Performance Measure of less than 94.3%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

8. TB cases with initial cultures positive for *Mycobacterium tuberculosis* complex must be tested for drug susceptibility with results documented in the medical record.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016 -12/31/2016). A compliance percentage of not less than 97% is required.

If data indicates a compliance percentage for this Performance Measure of less than 97%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

9. Newly reported TB clients with a positive AFB sputum-smear result must have at least three contacts evaluated as part of the contact investigation that must be pursued for each case.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 96% is required.

If data indicates a compliance percentage for this Performance Measure of less than 96%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

10. Newly identified contacts identified through the contact investigation that are associated with a sputum AFB smear-positive TB case must be evaluated for TB infection and disease.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016 -12/31/2016). A compliance percentage of not less than 86% is required.

If data indicates a compliance percentage for this Performance Measure of less than 86%, DSHS may (at its sole discretion) require additional measures to improve that percentage, on a timeline set by DSHS.

11. Contacts identified through the contact investigation that are associated with a sputum AFB smear-positive case and that are newly diagnosed with TB infection must be started on timely and appropriate treatment.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016 -12/31/2016). A compliance percentage of not less than 76% is required.

If data indicates a compliance percentage for this Performance Measure of less than 76%, DSHS may (at its sole discretion) require additional measures to improve that percentage, on a timeline set by DSHS.

12. Contacts identified through the contact investigation that are associated with a sputum AFB smear-positive case that are newly diagnosed with TBI and that were started on treatment must complete treatment for TB infection.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016 -12/31/2016). A compliance percentage of not less than 58% is required.

If data indicates a compliance percentage for this Performance Measure of less than 58%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

13. For Class-B immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who initiate medical evaluation within 30 days of arrival. *Arrival* is defined as the first notice or report, whether by fax, phone call, visit to the health department, or EDN notification.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017 -12/31/2017). A compliance percentage of not less than 63.5% is required.

If data indicates a compliance percentage for this Performance Measure of less than 63.5%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

14. For Class-B immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who initiate and complete evaluation within 90 days of arrival.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017-12/31/2017). A compliance percentage of not less than 50% is required.

If data indicates a compliance percentage for this Performance Measure of less than 50%, DSHS may (at its sole discretion) require

additional measures to improve that percentage on a timeline set by DSHS.

15. For Class-B immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB and who are diagnosed with TB infection (TB infection during evaluation in the US, increase the proportion who start treatment.

For FY18 reporting, data will be drawn from calendar year 2017 (1/1/2017-12/31/2017). A compliance percentage of not less than 74% is required.

If data indicates a compliance percentage for this Performance Measure of less than 74%, DSHS may (at its sole discretion) require additional measures to improve that percentage on a timeline set by DSHS.

16. For Class-B immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB and who are diagnosed with TB infection (TB infection during evaluation in the U.S. and started on treatment), increase the proportion who complete TB infection treatment.

For FY18 reporting, data will be drawn from calendar year 2016 (1/1/2016-12/31/2016). A compliance percentage of not less than 54% is required.

If data indicates a compliance percentage for this Performance Measure of less than 54%, DSHS may (at its sole discretion) require additional measures to improve that percentage, on a timeline set by DSHS.

Maintain documentation used to calculate performance measures as required by General Provisions Article VIII "Records Retention," and by Texas Administrative Code Title 22, Part 9 Chapter 165, §165.1, regarding retention of medical records.

XVIII. Court-Ordered Management

General Requirement

To provide options for management of non-compliant persons diagnosed with TB disease whose actions pose a public health threat.

Activities:

- A. The purpose of court ordered management is to ensure that:
 - 1. non-adherent TB clients complete an adequate course of TB treatment.
 - 2. clients receive appropriate evaluation and care when treatment is interrupted due to client's violation of the terms of the signed control order.
 - 3. the public is protected from infectious TB patients who have refused voluntary isolation when their actions pose a public health threat.
- B. Establishing provider/client agreement for TB care services.
 - 1. Ensure all clients with suspected or confirmed TB disease understand their role in receiving treatment and care for TB.
 - 2. Ensure clients understand services they will receive from the local TB program for successful treatment outcomes.
 - 3. Discuss with client, Form TB 410 *Order to Implement and Carry Out Measures For a Client with Tuberculosis*. This form serves as Texas' control orders for TB.
 - 4. Ensure the provider and client sign Form TB 410 acknowledging understanding of treatment and compliance expectations. All clients with suspected or confirmed TB disease are required to sign form TB 410 at the time of intake. A violation of any terms of the control order serves as grounds for court ordered management.
- C. Requesting court ordered management.

1. Consult with your local or DSHS attorney to begin court-ordered management process. Court ordered management may involve the court remanding client to receive DOT at his/her residence or involuntary admission to Texas Center for Infectious Disease (TCID). A locked wing for involuntary admissions opened at TCID on April 3, 2017.
2. Ensure client's medical records include the following:
 - A description of the physical and mental condition of the client;
 - The degree of infectiousness of client (i.e. AFB smear count) and the proposed threat to public health;
 - A description of non-compliant behaviors;
 - Document all attempts at contact, whether calls or visits
 - Ensure that case records show non-compliance issues and the health department's response to address the non-compliance
 - Include documentation from the clinician, health authority or an expert TB physician if client has converted to smear negative but is expected to become infectious again. Documentation should explain why client is a threat to public health.
3. Use the forms below to begin court-ordered management. Forms can also be accessed at,
<http://dshs.texas.gov/idcu/disease/tb/forms/default.asp#CourtOrder>
Complete DSHS form 86749_1 and include supporting documentation. Also include the length of time client is expected to remain at TCID if involuntary admission is being sought. Work closely with the jurisdiction's district attorney and DSHS attorney to ensure appropriate paperwork are completed and processed for review by the court.
 - DSHS form 86749_1: Health Authority's Affidavit of Medical Evaluation
 - DSHS form 86963_1: Application for the Extended Management of a Person with Communicable Disease
 - DSHS form 86964_1: Motion for Protective Custody
 - DSHS form 86966_1: Notification of Probable Cause Hearing

- DSHS form 86970_1: Order Appointing Attorney for Inspection, Setting, Hearing and Notice to Proposed Client
- DSHS form 86965_1: Order Appointing Special Master
- DSHS form 86968_1: Order for Protective Custody
- DSHS form 86969_1: Order for Continued Protective Custody and Setting Hearing on Application
- DSHS form 86972_1: Order for Court Reporter to Create Redacted Reporter's Records
- DSHS form 84004_1: Order of Transport
- DSHS form 84044_1: Waiver of Jury Trial and Right to be Present at Trial
- DSHS form 86972_1: Order of Commitment on Application for Extended Management of Person with Communicable Disease

D. Review legal justification for isolation

1. Health and Safety Code, Chapter 81, Communicable Diseases, Subchapter E. Control, 81.081.
2. "A health authority has supervisory authority and control over the administration of communicable disease control measures in the health authority's jurisdiction unless specifically preempted by the department." See <http://law.justia.com/codes/texas/2005/hs/002.00.000081.00.html>.

Appendix 1: NTIP Reporting Requirements

For TB cases, registries are required to ensure at least 99.2% valid responses for all NTIP reporting variables by the end of the current reporting year, and 99.4% by the Surveillance Branch deadline in mid-March of the following year.

Minimum NTIP variables required at the time of initial report:

- date of initial report
- date case was confirmed as a class 3
- criteria for the published case definition for a lab confirmed diagnosis or clinical case of TB or a clinical case of TB by provider diagnosis
- a valid and verified address
- race and ethnicity
- date of birth
- country of birth; if not U.S., and date of arrival into the U.S.
- for culture-confirmed cases, initial susceptibilities including MDR and XDR cases
- HIV status
- site of disease (select all that apply); if military, must provide at least two sites of disease when one of the sites is pulmonary
- vital status at diagnosis
- history of prior disease

The remaining variables are required to be reported within the current year:

- additional information for pediatric client
- sputum smear
- sputum culture
- smear/pathology/cytology of tissue and other body fluids
- culture of tissue and other body fluids
- NAA test result
- initial chest radiograph and other chest imaging study
- tuberculin skin test
- IGRA test result
- occupation
- primary reason evaluated for TB
- homeless within past year

- primary occupation within the past year
- injecting drug use within past year
- non-injecting drug use within past year
- excess alcohol use risk factor identified within past year
- additional TB risk factors
- immigration status
- date therapy started
- initial drug regimen

Upon case closure, registries must also provide valid responses for the following NTIP variables, if the case was alive at diagnosis:

- sputum culture conversion date (collection date must be at least one day (from last known positive sputum culture)
- moved; if yes, specify if in-state and use DSHS form TB-220 to submit to corresponding jurisdiction; if out of state, use IJT form; if out of the U.S., use CDC notification form or Cure-TB form
- date therapy stopped
- type of outpatient provider (all that apply)
- DOT
- final drug susceptibility testing
- final drug susceptibility test results; collection date must be at least 30 days from date of collection of initial susceptibility results

Appendix 2: Tuberculosis Funding Formula

NEEDS COMPONENT DISTRIBUTION	Weight (%)
Laboratory or Clinically Confirmed Cases	38
MDR-TB	5
TB Suspects	15
HIV/TB Co-Infected Cases and Suspects	10
TB Cases and Suspects from Special Populations	10
Total	78

PERFORMANCE COMPONENT DISTRIBUTION	Weight (%)
TB Cases Completing Treatment	7
TB Infections Completing Treatment*	5
Total	12

GEOGRAPHIC COMPONENT DISTRIBUTION	Weight (%)
Total Population in Funded Area	5
Total Square Miles in Funded Area	5
Total	10

*Surveillance Branch supplies data

Appendix 3: Glossary of terms

Laboratory or Clinically Confirmed TB Cases – All culture-confirmed and provider-diagnosed Texas and non-Texas cases assigned to a jurisdiction. Funding formula combines all confirmed counted cases within a five-year period.

Texas Cases – Cases that meet the current Texas case definition for verified TB to determine annual incidence.

MDR-TB Cases – Multi-drug resistant TB cases resistant to at least isoniazid and rifampin. MDR-TB cases are a subset of all counted cases assigned to a jurisdiction.

TB Cases Completing Treatment – All Texas and non-Texas cases completing treatment based on the National TB Indicators Project (NTIP).

TB Suspects – Persons started on a four-drug TB regimen while awaiting laboratory or clinical information resulting in a disposition that TB was ruled out.

HIV/TB Co-infected Cases and Suspects – Confirmed or suspected TB cases with comorbid HIV condition.

TB Cases and Suspects from Special Populations – Confirmed or suspected Texas and non-Texas TB cases who fall in one or more of the following groups:

- A child less than five years at diagnosis;
- U.S. born minority;
- Homeless;
- Foreign born;
- Person with history of substance abuse;
- Border resident-La Paz counties;
- Person with diabetes; or
- Client of a DSHS-funded refugee clinic

Total Population in Funded Area – Based on Population Censuses' Datasets

Total Square Miles in Funded Area – Calculated from County Level Geometry using ArcGIS 10.2.2. Data set downloaded from the Texas Natural Resources Information System. File last updated April 2012.

TB infections Completing Treatment – Persons identified as asymptomatic, having a positive test using Interferon-Gamma Release Assays (IGRA) or Tuberculosis Skin Test (TST), and a normal chest X-ray. These persons shall receive and complete treatment for TB infection using a DSHS Branch approved treatment regimen that were identified as:

- contacts to a counted case in Texas, or
- member of a special population.